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Australian Communications Deregulation

Briefing Paper

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Strategic Technology Management Pty Ltd
Incorporated in Victoria
18 Queen Street Melbourne
3000 Australia

Management Consultants
Information & Communications Industries National 03
Phone: 629-2076 International +613 Fax: 629-2077

for the

Canadian Consulate
Melbourne, Australia

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(Strategic Technology Management Pty Ltd.)

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PART I - COMMUNICATIONS REGULATIONS AND MARKETS

By: Strategic Technology Management Pty. Ltd.)

1. THE AUSTRALIAN TELECOMMUNICATIONS INDUSTRY THE PRE-MAY 1988 - STATEMENT ENVIRONMENT

1.1 Introduction

This section of the briefing document outlines the industry structure and regulatory environment applying to the Australian telecommunications industry prior to implementation of the policy changes announced in the May 1988 Statement1.

1.2 The National Carriers

Australia has, and will continue to have, three national telecommunications carriers, each having its own specific role in providing telecommunications services. These are:

* Telecom Australia - the domestic telecommunications carrier which provides a full range of telecommunications services within Australia, as well as offering a wide range of customer premise equipment and a number of value added services;

* OTC (The Overseas Telecommunications Commission) - the international communications carrier which provides all international communications in and out of Australia;

* AUSSAT Pty Ltd - the satellite communications carrier which provides satellite-based communications services, but not public switched telecommunications services.

The roles of each of these carriers prior to the changes announced in the May 1988 Statement are described in the following sub-sections.

1.2.1 Telecom Australia

Telecom Australia (commonly referred to as "Telecom") is the trading name of the Australian Telecommunications Commission, a statutory authority of the Commonwealth Government which was established by the Telecommunications Act 1975. Telecom Australia took over the provision of telecommunications from the former department of state, the Postmaster-General's Department, which also had responsibility for both postal services.

The principal functions of the Commission as defined in the Act were to plan, establish, maintain and operate telecommunications services within Australia.

The Commission was required by the Act to perform these functions in such a manner as best meets the social, industrial and commercial needs of the Australian people for telecommunications services, and, so far as it is, in its opinion, reasonably practicable to do so, make its telecommunications services available throughout Australia for all people who reasonably require those services. In particular, the Commission was required to have regard to:

* the desirability of improving and extending its telecommunications services in the light of developments in that field;

* the need to operate its services as efficiently and economically as practicable; and

* the special needs for telecommunications services of Australian people who reside or carry on business outside the cities.

The Act ensured that Telecom would have a monopoly over the provision of domestic telecommunications. It prohibited the resale of telecommunications services except with the authority of the Commission or as provided in the Telecommunications By-laws. It also prohibited the construction, maintenance or operation of telecommunications installations by other than the Commission, with some specific exceptions. The principal exceptions were:

* the attachment of a line, equipment or apparatus to a telecommunications system, to the extent that the attachment is authorised by the Commission;

* for the communications of a single legal entity, contained entirely within a given property (land or premises);

* operational communications systems for railway, tramway and bus services;

* national and commercial broadcasters, in providing broadcasting services;

1.2.1 (cont'd)

* radio communications licensees, as authorised by their licences;

* OTC and AUSSAT as authorised by their respective acts;

* AUSSAT users (see 1.2.3 below);

* as authorised by the Commission.

The Act also established Telecom as the regulatory authority, ie as the body which set the rules in regard to such things as:

* facilities and equipment which could be connected to its lines and networks; and

* exemptions to its common carriage monopoly, for the construction and/or sharing of telecommunications facilities and networks and for the provision of value added services (VAS).

The rules were laid down in the Telecommunications By-Laws and in a series of policy documents and technical specifications issued by Telecom.

Telecom's product and service offerings, and the areas which had been opened to competition from private industry are discussed in Section 1.4 below.

1.2.2 OTC

The Overseas Telecommunications Commission was established by the Overseas Telecommunications Act 1946. It has since had the responsibility of being Australia's sole international telecommunications carrier. Its legislative charter has generally been seen as barring it from providing domestic communications services.

OTC provides international gateway facilities for a full range of international telecommunications services, including telephony, telex, packet switching and international leased circuits. It has major Intelsat earth stations at Ceduna (South Australia), Healesville (Victoria), Moree (New South Wales and Perth (Western Australia), and gateway switching centres in Sydney and Melbourne.

1.2.2 (cont'd)

Most of OTC's traffic either originates or terminates via Telecom's networks, although there are direct connections to OTC for some specialised services, such as Interplex, an international private telegraph message switching service. In addition, most international leased circuit tails are provided by Telecom.

In recent years, OTC has become involved in the provision of international value added services, such as the Dialcom electronic mail service. With this service in particular, OTC was perceived by Telecom to be in breach of its charter, in that it was providing electronic mail services for communications between Australian users.

Ultimately this was resolved by a joint venture between OTC and Telecom for the provision of electronic mail services. On the other hand OTC has firmly opposed the provision of certain kinds of international value added services over its leased circuits, by private companies, such as offered by GEISCO and IP Sharp.

1.2.3 AUSSAT

AUSSAT Pty Ltd is a company incorporated on 6 November 1981, under the law of the Australian Capital Territory. From the outset, all shares in AUSSAT were held by the Commonwealth Government. Subsequently, Telecom Australia purchased 25% of Aussat's equity from the Commonwealth.

AUSSAT was established to provide and operate Australia's national telecommunications satellite system.
The services provided by AUSSAT have been regulated by the Satellite Communications Act 1984.

The Act defined AUSSAT's primary object as being the business of providing a telecommunications system for Australia by the use of space satellites, and space satellite facilities for use in telecommunications systems for neighbouring regions. The Act further specified that Telecom and AUSSAT together "will provide the national telecommunications network for Australia."
The Act specifically prohibited AUSSAT from providing public switched telephone and data services. The Act also prohibited:

* the resale of the right to transmit signals to an AUSSAT satellite;

1.2.3 (cont'd)

* the use of AUSSAT satellite facilities for the business of providing facilities for telecommunication between other persons, other than by Telecom, OTC, Australia Post or another eligible person declared by regulations (no such person has ever been declared).

- The other major change that the Act introduced to the telecommunications industry was that it allowed both AUSSAT, and users of a facility in an AUSSAT satellite (ie AUSSAT customers) to erect, maintain or operate a telecommunications installation that is necessary or desirable for th use of such facilities, including a telecommunications installation for transmission of signals between a satellite earth station and premises owned or occupied, and used by AUSSAT or the user. This was a significant additional exception to the Telecom monopoly.

1.3 Telecommunications Regulation

Over the years since its establishment, Telecom Australia, as the principal regulator, built up a large and relatively complex body of regulations governing:

* the way users could use Telecom services, particularly with respect to the use of leased lines and private networks, and to the operation of customer switching systems (known in Australia as PABX and in North America as PBX);

* telecommunications equipment and services which could be supplied by the private sector in competitive markets (see Section 1.4).

The most contentious regulatory constraints on the use of leased lines and private networks related to:

* interconnection of private networks to the public switched telephone network (PSTN) - where the possibility of bypassing the trunk (toll) network existed, an interconnection fee was payable that compensated Telecom for loss of revenue. Furthermore, interconnected calls had to either originate within or terminate within the private network - calls which both originated and terminated in the PSTN were not allowed to be routed via a private network;

1.3 (cont'd)

* sharing of private networks between different entities was not allowed unless it could be shown that the entities constituted a common interest group (CIG). A CIG was defined as a group of entities having a common interest or business other than operating a telecommunications service. Operating a private network was to be no more than ancillary to, or facilitating the group's business, and there was to be significant traffic between the members of the group arising from the common interest.

The operation and maintenance of PABXs was another area of major contention among users. While users were permitted to buy PABXs in a competitive market, Telecom retained a monopoly on the maintenance of all PABXs connected to the PSTN. Until fairly recently, this monopoly extended to the control of day-to-day customer data changes, such as change of extension number and class of service. More recently Telecom allowed the provision of customer access terminals on PABXs. Customer data changes could be made from such a terminal, providing that no access to maintenance functions was possible.

Many users were dissatisfied with the maintenance service provided by Telecom and would have preferred to have the PABX maintained by the original supplier. Some of the larger user organisations felt they could do better maintaining their own PABXs.

1.4 Competition and the Australian Telecomunications Market

The competitive part of the Australian telecommunications market can be divided into the following four components:

* supply of public switching and transmission equipment and materials to the national carriers: Telecom, OTC and AUSSAT;

* supply of transmission equipment to the private market;

* supply of customer terminal and switching equipment to Telecom and the private market;

* supply of value added services to the private market;

* supply of mobile communications base stations, terminals and services to Telecom and the private market.

The pre-May Statement status of each of these markets is dealt with in the following sub-sections.

1.4.1 Public Switching and Transmission

The three national carriers have used public tender processes to select and purchase materials for the construction and operation of their telecommunications facilities. Of the carriers, Telecom is by far the major market.

While public tenders have been open to any company, whether Australian or foreign-owned, great policy emphasis has been placed on local content in the tender selection process, to the extent of forcing new entrants to establish local manufacturing facilities. As a result, the bulk of equipment and materials purchased by Telecom has had a high proportion of local content. Telecom's major suppliers, all with local production capabilities, have included:

* Austral Standard Cables; * Olex Cables; * L M Ericsson;
* NEC Australia; * Alcatel STC; * GEC; * Plessey;
* Siemens; * Philips; and * AWA.

1.4.2 Private Transmission Equipment

The private transmission market (principally microwave equipment) has consisted of the following major segments:

* railways and public utilities (electricity supply and gas pipe-lines) for provision of operational communications;

* television broadcasters (national and commercial) for provision of program links;

* major business corporations (banks, oil industry etc.) for data communications and for transmission links to satellite earth stations;

* operators of mobile communications for fixed links to transmitter sites.

1.4.3 Customer Terminal and Switching Equipment

A large part of the customer terminal and switching equipment market has been open to competitive supply direct to users, for some time. Nearly all types of equipment which have been open to competitive supply, have also been offered by Telecom.

1.4.3 (cont'd)

For suppliers therefore the market has been segmented into two parts, supply to Telecom and supply direct to users. All equipment connected to Telecom lines has been regulated through permitted attachment rules. The severity of these rules has depended on the type of equipment, with minimal regulation applying to data communications equipment, and extensive regulation applying to PABXs.

The areas where competition has been restricted or not allowed are:

* the first telephone on single line telephone services has been exclusive to Telecom;

* competitively supplied telephone handsets for use on extensions were restricted to handsets with additional features when compared to Telecom's basic handsets (this restriction was lifted when Telecom's basic handsets began to incorporate advanced features such as memory dialling);

* key systems (or "Small Business Systems" - SBS) have been exclusive to Telecom;

* competitively supplied PABX systems were subject to a complex regulatory regime, designed to ensure: maximum local content; a long term commitment to the market by suppliers; maintainability by Telecom over the life of the system.

In addition, as noted previously, Telecom held a monopoly on the maintenance of all network connected privately supplied PABXs.

Areas which were open to unrestricted competition include:

* facsimile (not offered by Telecom);

* answering machines (not offered by Telecom);

* cordless telephones;

* data modems multiplexors, data terminals etc;

* customer earth stations.

1.4.4 Value Added Services (VAS)

The definition of what constitutes a value added service which may be offered by private supplies in the open market has been in the hands of Telecom. Until recently the Telecom position was that it would permit VAS which could not be regarded as telecommunications services or unadorned message switching services. A VAS has not been regarded as a telecommunications service if the use of telecommunications is only incidental to the provision of the service.

Typical VAS which have been allowed in Australia are:

* computer bureau services;

* information retrieval services, including videotex;

* communications services involving delayed delivery, including mail box type electronic mail services (text or voice);

* telephone answering services;

* radio paging services (see next sub-section). Telecom itself has been offering VAS in competition with private suppliers. Telecom VAS include Viatel (a videotex service), Keylink (an electronic mail service) and a range of paging services.

1.4.5 Mobile Communications

The mobile communications market in Australia has consisted of the following segments:

* cellular mobile telephone service (CMTS) - a Telecom monopoly on provision of the network and fixed transmission facilities, with competitive provision of in-vehicle, portable and hand-held terminals;

* paging services - competitive provision of services and terminals;

* private mobile communications (HF, VHF and UHF), including trunked private mobile radio systems - base station facilities and mobile units generally owned and operated by user organisations, although there is some shared use and third party use of trunked systems:

* aeronautical and other public radiocommunications services.

2. OVERVIEW OF THE PROPOSED REGULATORY FRAMEWORK

2.1 The May 1988 Statement

The Ministerial Statement of May 1988 launched a new era in the structure of the telecommunications industry in Australia. It ushered in a number of reforms for the industry, including:

* the establishment of an independent regulatory authority - the Australian Telecommunications Authority (AUSTEL), modelled largely on the British Office of Telecommunications;

* some easing of the carriers' previous borrowing constraints;

* continuing role of existing carriers as the exclusive providers of basic or reserved services - very little has changed as far as provision of network services is concerned;

* full competition in the provision of Value Added Services - although the wide definition of reserved services may effectively limit the scope for a broader definition of VAS;

* progressively increasing competition in the provision of Customer Premises Equipment (CPE), especially PABX and SBS. Telecom retains its role as sole provider of the first telephone until 30 June, 1991, after which this market will also be open to competition;

* competition in the maintenance of PABX and SBS, previously the monopoly domain of Telecom.

The May 1988 Statement also announced new corporate structures for the carriers. Telecom would have a new enabling Act, and become the Australian Telecommunications Corporation. OTC would to be incorporated as a company, OTC Limited, wholly owned by the Commonwealth. Aussat would remain a company.

According to the May 1988 Statement, One of AUSTEL's tasks will be to determine if the cellular mobile telephone service (CMTS) should continue as a monopoly reserved service. The US FCC standard CMTS terminals in Australia allow for two overlaid cellular services to operate in each service area, with the same terminals able to access each service if desired.

2.1 (cont'd)

A similar assessment will also be required to determine whether the network(s) of public Telepoints associated with the new generation of cordless telephones (CT2), as being implemented in the UK, will be a reserved service.

AUSTEL's evaluation will take place in an environment of a changing private sector in the telecommunications industry. One of the most notable of these has been the arrival of major overseas carriers, such as Bell South and Cable & Wireless on Australia's doorstep, with the part or total acquisition of local telecommunications service companies. Clearly these moves are in anticipation of gaining participation to the main game - carrying high revenue, high margin traffic, such as cellular.

AUSTEL will also face some major definitional problems:

* the review of what constitutes a Common Interest Group; and

* the determination of a precise boundaries between basic (reserved) services, value added services, and private network services (PNS).

The new Chairperson designate of AUSTEL, Mr Robin Davey was appointed recently. AUSTEL will officially commence operations on July 1, 1989.

2.2 **The Telecommunications Bill 1989**

The Telecommunications Bill 1989, together with other new telecommunications legislation2, has now passed unamended through both the House of Representatives (our Lower House), and the Senate. It will come into force on 1 July 1989. The legislation determines:

* the establishment, functions and powers of AUSTEL;

* the regulation of telecommunications networks, including the operation of telecommunications networks and facilities, reserved services and reserved service charges;

* value added services and private network services, including class licences, registration of services, and unlicensed services;

2.2 (cont'd)

* technical regulation, including technical standards, permits for customer equipment, licensing of cabling service providers;

* investigations of complaints; and

* the constitution of AUSTEL.

In essence, the new Act reflects the intent of the May 1988 Statement. A copy of its Table of Provisions is attached as Appendix A.

2.3 **The New Industry Development Arrangements (IDA's)**

The new IDAs3 are designed to provide a transition period for the CPE industry to adjust from the present regulatory environment to a more liberalised environment. They replace the policies and regulations which have hitherto been determined and administered by Telecom. These were designed to promote local industry and ensure a significant level of local content in CPE purchased by Telecom, and in competitively supplied PABX and CMTS terminals.

The IDAs are in the form of a points scheme which will apply from 1 July 1989 to 30 June 1993, and will be administered by AUSTEL. They only apply to first telephones, PABX, SBS and cellular mobile telephones. All other CPE will be free of such regulation.

Provided that their equipment is technically compliant, suppliers can qualify for authorisation for their CPE products to be connected the public telecommunications network, if they earn sufficient points, which are allocated on the basis of:

* R&D expenditure in Australia;

* level of CPE exports from Australia.

* the level of local manufacturing content.

For Research and Development, points will accrue at the rate of 20 points per 1% of the supplier's turnover devoted to R&D on CPE of the designated types (first telephones, PABX, SBS and cellular telephones), to a maximum of 100 points. For export, 5 points will be allocated for each 1% of turnover derived from export of the designated CPE, again to a maximum of 100 points.

2.3 (cont'd)

The points allocated for local manufacture vary according to the type of product, as shown in the table below.

Table of points for local production

		First	PABX	Cellular & SBS Telephone	Points
Local Production Component:	less than	25%	15%	15%	0
	equal to	25%	15%	15%	50
	greater than	50%	25%	25%	100

The points in the three categories are aggregated. To qualify for approval to attach the supplier's CPE to the network for each year, this aggregate must exceed a minimum threshold, as calculated for the preceding year.

The one aggregate points threshold applies to all four designated CPE. The thresholds are as follows (for each financial year commencing 1 July):

1989/90 requires 140 points for the 1988/89 year to June 1989, or existing eligibility to supply product under current Telecom arrangements;

1990/91 requires 140 points for the year 1989/90;

1991/92 requires 170 points for the year 1990/91;

1992/93 requires 200 points for the year 1991/92;

1993/94 no requirements.

New entrants are required to submit a detailed plan of their proposed operations indicating how they are going to achieve the threshold required for the year of their entry, in order to gain endorsement. This does not preclude a new entrant from joint venturing with a local supplier which already has points credits.

Following termination of the scheme, the operative form of assistance will be the tariff, currently set at 23% and scheduled to phase down to 15% by 1993.

2.4 Implications of the New Environment for Suppliers of Communications Products and Services

2.4.1 The New Regulatory Environment

The new telecommunications regulatory environment described above creates some new opportunities for participation in the Australian telecommunications market. These include:

* the possibility of becoming the second cellular telephone carrier, if AUSTEL recommends licensing of an additional operator and the Government decides that there should be such competition;

* increased scope to supply CPE, particularly PABX, SBS and cellular mobile telephones. Prior to July 1993, entry would require suitable plans to be formulated to satisfy the IDAs described in 2.3. Otherwise entry could be through an existing supplier already satisfying the points requirements.

Note, however, that the CPE market is expected to be fragmented, with nearly all the major international suppliers vying for market share;

* the provision of customer premises cabling and CPE maintenance services.

In many other respects the market described in Section 1.4 will remain the same. The three national carriers will retain their exclusive status as suppliers of reserved network services, and hence will continue to constitute the primary market for network switching and transmission equipment. The types of VAS which can be offered are not expected to change dramatically, unless (or until) AUSTEL produces a significant redefinition of VAS vis-a-vis reserved services. However the market may feel the impact of Telecom, OTC and AUSSAT now being able to compete freely in the provision of VAS, whether domestic or international.

2.4.2 The "New" Telecom

As the Australian Telecommunications Corporation, Telecom will have greater independence from government controls, and in many respects will be able to act like a private corporation.

In anticipation of its new powers, and in preparation for an increasingly competitive environment, Telecom has been entering into special business arrangements, including joint ventures, with a number of its suppliers. Until 1 July 1989, Telecom has required Ministerial approval to enter into such joint ventures, but after that date only approval by its own board will be required.

2.4.2 (cont'd)

One of key the purposes of such joint ventures is to enable Telecom to secure exclusive sourcing and marketing rights for CPE and VAS, for on-sale.

Some of the more significant Telecom joint ventures announced since the May 1988 Statement include:

* Information Switching Technology Pty Ltd - a joint venture with Fujitsu to manufacture ISDN compatible PABXs, to be sold by Telecom;

* Hewlett-Packard Australia Ltd - a purchase by Telecom of 50% of the Australian computer manufacturing arm of Hewlett-Packard to facilitate the development of equipment to integrate computer and communications technology;

* QPSX Pty Ltd - a joint venture with the research arm of the University of Western Australia to develop and market a new fast packet technology which has been recognised as an IEEE standard;

* Telecom Technologies Pty Ltd - a joint venture with Exicom Pty Ltd to develop and supply telephones and SBS for the Australian and export markets (Exicom purchased the telephone manufacturing business of AWA Ltd).

In the area of CPE particularly, these joint ventures have created a barrier to new entrants from that part of the Telecom market which is for equipment for Telecom to on-sell to its customers. The supply of first telephone, SBS and PABX to Telecom is already accounted for by such agreements. Furthermore, it has just been announced that Telecom has reached agreement with Fujitsu for it to supply customers with an exclusive range of cellular terminals to be manufactured by Fujitsu in Dallas, Texas.

As a consequence of these agreements, Canadian CPE suppliers would have the following options for entering the Australian CPE market (at least until 30 June 1993 when the IDA scheme expires):

* supply direct to the competitive market, after demonstrating to AUSTEL that points requirements will be met;

2.4.2 (cont'd)

* supply direct to Telecom, again after demonstrating to AUSTEL that points requirements will be met. Existing Telecom joint ventures make this a difficult course. The supplier would probably need to demonstrate that it had a product which complemented the range already available to Telecom;

* through an agreement or joint venture with an existing supplier already meeting the points requirement, which is supplying equipment either directly to the market and/or through Telecom.

There will be opportunities for new suppliers to Telecom, in some areas of network equipment. Transmission equipment and a range of special purpose equipment for installation, maintenance and management purposes is open to competitive tender.

There are fewer opportunities in the switching market. Northern Telecom recently won a contract to supply packet switching equipment to upgrade Telecom's Austpac network, effectively closing this area of opportunity for some time.

Also Telecom currently buys only the Ericsson AXE system for its telephone network. However, because AXE is seen to be deficient in providing centrex, intelligent network facilities and basic rate ISDN, there is a possibility that the opportunity to offer an alternative telephone switching system could arise in the near future.

3. TELEVISION IN AUSTRALIA

This part of the paper is intended to describe the present status of the television industry in Australia.

Television viewers in the major capital cities have the choice of five television channels, two national and three commercial. In other centres, viewers generally have the choice of one commercial and one national channel. These services are broadcast in the VHF and UHF bands, using the PAL system.

In addition there are a number of specialised television services in operation, or about to commence service, which use satellite and MDS transmission and which are only available to business premises.

All of these categories are described briefly below.

3.1 The National Broadcaster

There are two national government-owned television networks. These are operated by:

* The Australian Broadcasting Corporation (ABC) - The ABC provides a comprehensive publicly funded television service (ie no advertising) to all significant population centres in Australia, similar in many respects to the BBC. In addition, the ABC provides a direct satellite service to remote communities and homesteads using 30W transponders on AUSSAT's current generation satellites. This service is known as HACBSS (Homestead and Community Broadcasting Satellite Service).

* The Special Broadcasting Service (SBS) - SBS provides a multi-cultural television service to the capital cities and major regional centres. A large part of the programming is in foreign languages, sub-titled in English, and is intended to serve the migrant communities of various ethnic origins. This network was originally completely publicly funded. However last year the Government decided that it would be partially funded by advertising.

It should be noted that there are no television receiver licence fees in Australia. Public funding of national broadcasters is entirely from general taxation revenue.

3.2 Commercial Broadcasters

There are currently three commercial television stations in each of the major capitals (Sydney, Melbourne, Brisbane, Adelaide and Perth). Until recently there were another 35 regional stations one for each significant major population centre, including Canberra, Hobart and Darwin. All these stations were originally established as independent operations, with little or no networking.

Each station has a service area defined in terms of particular communities and their populations. Where a single transmitter can not adequately serve the entire area, translators are used to re-broadcast the signal. No company was permitted to have significant ownership of more than two stations.

In addition, there are three remote commercial television services (RCTS) serving areas not previously covered by commercial television. Like HACBSS, these are direct satellite broadcasting services using 30W transponders on

AUSSAT satellites. Each service covers a different region of Australia, with the population of each region being in the range 90,000 to 130,000. Since it is difficult to provide a commercially viable service to such a small market, the operators receive subsidies from State and Federal governments.

Two major changes to commercial television have occurred recently.

The first of these has been the establishment of three national commercial networks to serve the five major capital city markets. This was encouraged by changes in ownership rules imposed by the Federal government, which removed the two station limit and allowed a company to own stations to a potential audience limit of 60% of the Australian population. This has enabled three companies to dominate the commercial television business in Australia. These are:

* Bond Corporation Pty Ltd (Bond Media Ltd - the 9 network);

* Northern Star Holdings Ltd (the X TEN network);

* Qintex Ltd (Universal Telecasters Ltd - the 7 network).

However, these companies paid high prices for the stations which they now own, at a time when ownership seemed like a licence to print money. More recently, advertising revenue growth has stalled while operating costs have continued to rise. Qualified industry analysts have suggested that all three networks are facing serious financial problems, and that in practice there may only be room for two such networks to make a profit in the future.

The other major change to commercial television has derived from the Federal government's policy of giving regional viewers the choice of three commercial television stations. This is to be implemented by a process called aggregation. The licensed service area for each regional station will be expanded to include those of its neighbouring stations. New transmitters will be installed to serve the expanded area which will be designated an approved market. Each approved market will then be served by three commercial channels. Prior to aggregation, regional stations have tended to be loosely affiliated with one of the national networks for the purposes of taking non-local news and current affairs, but they mostly have taken the pick of drama programs from all three national networks. Following aggregation, each channel will be closely affiliated with one of the national

3.2 (cont'd)

networks and will carry almost identical programming to the parent network.

The first approved market for aggregation is in Southern New South Wales, covering Canberra, Orange, Dubbo, Wollongong and Wagga. Partial service commenced on 31 March 1989 with two new channels opening in Canberra and Wollongong. The second and third channels will commence operation in the other centres later this year. Another three approved markets are planned to be aggregated progressively over the next three years.

Media industry analysts are predicting serious problems ahead for the aggregating channels, with insufficient advertising revenue to go around to recover the costs of expanding to much larger service areas. Some analysts believe that these problems are likely to slow down, if not completely halt, the aggregation process before it is completed.

3.3 Other Television Services

The Federal Government has defined a class of services which it terms Video and Audio Entertainment and Information Services (VAEIS), which currently may be delivered by satellite or Multipoint Distribution Systems (MDS).

At present, these services are restricted to being delivered to business premises. However, they are seen by many as a forerunner to pay television.

The best known, and longest established VAEIS is Sky Channel, operated by Bond Media Ltd. This delivers video entertainment to hotels, clubs and TABs (ie betting agencies of the Totalisator Agency Board). It should be noted that there were originally three licences issued for satellite delivered services in this category. However these are now all owned by Bond Media, and only a single service is provided.

More recently, services have been licensed to be provided via terrestrial MDS transmission. A limited number of licences have been issued to provide such services which include, for example:

* tourist information to international hotels;

* business television services, including a proposed parliamentary channel akin to C-SPAN in the US.

3.4 Regulation of Television

Commercial television is regulated by the Australian Broadcasting Tribunal (ABT). The ABT is a quasi-legal body that administers the Broadcasting Act 1942. It conducts public hearings for the granting and renewal of broadcasting licences. Licenses are subject to renewal every three years, and a public renewal inquiry may be held if the Tribunal believes it is necessary because of public complaints or other important issues.

The ABT sets standards for Australian content on commercial television. Imported advertisements are prohibited and high levels of local program content are required.

The ABC and SBS are not regulated by the ABT. These organisations are governed by specific charters though their own Acts of establishment.

VAEIS services also are not regulated by the ABT. Licences are issued by the Department of Transport and Communications under the Radiocommunications Act 1983. Licensees are required to comply with VAEIS guidelines, under which VAEIS providers are expected to observe the spirit and intent of the ABT program and advertising standards.

4. PAY/CABLE TELEVISION IN AUSTRALIA

4.1 Background

From 1980 to 1982, the ABT, under direction from the Minister for Communications, conducted an inquiry into the possible introduction of cable and subscription television services in Australia. The ABT report4 recommended the introduction of cable television services and radiated subscription television services in Australia as soon as practicable. However, the ABT's recommendations were shelved following a change of government in 1983. Subsequently, in 1986, the then Minister for Communications announced a moratorium on pay television at least until September 1990 and foreshadowed that a review of pay television policy would be undertaken prior to that date. In April 1988, the then Minister for Transport and Communications announced that this review would be undertaken by a group of officials in the Department of Transport and Communications. The review was to examine options for the introduction of pay television, but was not to recommend options or argue for particular policies. The inquiry was conducted internally and without public submissions. The results of the review5 were published early this year, and are discussed in the next section.

4.1 (cont'd)

In addition, early in 1989, the House of Representatives Standing Committee on Transport, Communications and Infrastructure (commonly the Saunderson Committee) commenced its own inquiry into New Broadcasting-Related Services, including pay television. This inquiry is discussed briefly in Section 6.3.

4.2 The DOTAC Report

The report Future Directions for Pay Television in Australia considered a range of social, economic, technical and industry development issues relating to the possible introduction of pay television in Australia. It postulated two possible models for a pay television industry structure, based on whether or not carriage and content are separated. The two models are:

* a broadcasting model - under which pay television operators would control both the carriage system (terrestrial transmitters, satellites or cable) and the sources of programs (content) - this is seen to imply a monopoly in the supply of pay television and hence to require a powerful regulatory regime to control the conduct of the operators, to preserve the public interest;

* a publishing model - under which the carriage system is provided by the national carriers, over which operators would supply competing pay television services - this is seen to require a light regulatory regime, since the structure would ensure that participants have no choice but to act competitively.

Based on these two models, Future Directions proposed a comprehensive range of options for the establishment and regulation of pay television.

Industry response to this report has generally been one of disappointment. Although the Department was not to recommend options, the report provides no basis even for the evaluation of the options presented. It is completely open-ended and provides no analysis of the likely consequences of any particular policy direction.

4.3 The Parliamentary Inquiry

The Saunderson Committee has received a large number of submissions from a wide range of interested parties (a list of submissions is provided at Appendix C. It has conducted several public hearings in Canberra, Sydney and Melbourne, before which most of the organisations making submissions have appeared.

These submissions and hearings have demonstrated a high level of interest in the subject of pay television. Many of the submissions support its introduction, but some are opposed to pay television, or wish to see it introduced with strict controls to ensure high levels of local program production.

The most vigorous opponents of pay television are the commercial television operators. They see pay as only adding to their current financial difficulties and would like the moratorium to be extended to the late 1990s. The Saunderson Committee is expected to report to parliament in August.

4.4 The Strategic Technology Management Pay Television Study

Strategic Technology Management has just completed a major multi-client study of the options for pay television in Australian, and a 200 page report Pay Television: The Australian Options and Their Impacts is available for purchase. The starting point for the study was the DOTAC report discussed in 6.2 above.

Initial clients for the study are from industries which include government, cinema, equipment manufacture, television, program production, program distribution and telecommunications.

The report provides detailed quantitative analysis and projection of potential demand and revenue, and likely service provision costs. Consumer market research was undertaken to obtain an indication of likely market demand for pay television. The results of this research, together with available data on the Australian and US television/video markets, were used to formulate several demand scenarios. These demand scenarios were combined with a number of different supply scenarios, in order to evaluate the potential commercial viability of the various service business functions likely to be involved in the provision of pay television.

4.4 (cont'd)

The report also provides an informed assessment of the structural, regulatory and technological options available for the introduction of pay television in Australia.

The report identifies that there is an important trade-off to be made in Australia between the cost of providing programming material for a number of pay television channels with popular appeal, and the cost of the delivery system to be used.

All relevant delivery systems are examined in the report, namely, UHF, MDS, satellite and cable. Given the expected high cost of quality programme material, particularly Australian made material, the report suggests that a low cost delivery system may be necessary to ensure a viable industry.

Theoretically, the lowest possible cost for delivery of pay television would involve using UHF transmission. However, under DOTAC's UHF spectrum allocation plans, only a single UHF pay television channel is possible in each capital city or regional centre. This option is therefore discounted in the report.

4.5 **Possible Outcomes for Pay Television in Australia**

About a year ago, it seemed inevitable that the Commonwealth Government would establish a policy for the introduction of pay television and lift the moratorium in 1990. What was not clear was which delivery systems would be permitted, and what structural and regulatory frameworks would apply, except that it seemed likely that Telecom would have a monopoly on the provision of cable systems.

DOTAC's Future Directions report did nothing to clarify the likely policy outcomes. Furthermore, the financial problems of the commercial television operators, and their intense opposition to pay television, suggests the possibility that the Government may come under strong pressure to extend the moratorium from the powerful corporations which own the major networks.

The Strategic Technology Management report provides a basis for rational assessment of structural, regulatory and technological options. To the extent that it is used by DOTAC to formulate policy proposals and by other clients to lobby government, it may influence the policy outcome. On balance, Strategic Technology Management considers thatit is likely that the Government will lift the pay television moratorium, with the delivery system adopted being either

4.5 (cont'd)

MDS, or satellite, or both. Cable delivery is expected to be too costly in Australia, given likely prohibition on aerial construction of cable systems.

It is much harder to predict the structural/regulatory environment under which pay television would operate. Policy decisions in this area will be crucial to developing a viable industry. They will have a major bearing on the cost of providing service, the price to consumers and hence on consumer demand.

Given a policy outcome which does not impose excessive cost burdens on a pay television industry, the Strategic Technology Management study projects that there could be between 1.0 and 2.5 million subscribing households by 1995. This would represent a substantial market for subscriber reception and decoding equipment.

NOTES

1 "Australian telecommunications services: a new framework" Statement by the Minister for Transport and Communications, 25 May 1988, Australian Government Publishing Service, Canberra.

2 The Australian Telecommunications Corporation Bill, the Telecommunications Transitional Provisions and Consequential Amendments Bill and the Telecommunications Fees Bill.

3 "New Industry Development Arrangement - Customer Premises Equipment" Department of Industry, Technology and Commerce and Department of Transport and Communications, 22 February 1989 - see Appendix B.

4 "Cable and Subscription Television Services for Australia", Report of the inquiry by the Australian Broadcasting Tribunal into Cable and Subscription Television Services and Related Matters, August 1982, Australian Government Publishing Service, Canberra.

5 "Future Directions for Pay Television in Australia" Department of Transport and Communications, Communications Technology Division, February 1989, Australian Government Publishing Service, Canberra.

ALTAIR SECURITY & COMMUNICATION SYSTEMS P/L
Shop 2, 148 Maroondah Highway, Croydon, Victoria, 3136.
P.O. Box 626, Ringwood, 3134.
Tel. (03) 723 6364 Fax. (03) 723 6335

PART II - SELLING TO THE AUSTRALIAN FEDERAL GOVERNMENT

1. Scope

The purpose of this Report is to provide an understanding of the Federal Government Purchasing Environment related to ADP (Automated Data Processing) and Hi-Tech purchasing.

The Report also looks at:

Tender procedures and the impact of Government policy on the purchasing of ADP and Hi-Tech equipment by individual Departments.

Defence Department requirements relating to Security Clearances and Government Policy.

The key personnel within the Department of Administrative Services and Defence. These people are accessible and co-operative in directing suppliers to the relevant customer groups within the Canberra Environment.

The various terminologies used in relation to Government Contracts is explained in Section 6 under Tender Procedures.

2. Overview

All Government Purchasing requirements exceeding the threshold limit of $20,000 AUD must be by Tender.

The normal procedure is to use the " Request for Tender" (RFT) process. However, Government Departments are increasingly using " Restricted Request for Tender" (RRFT).

Common items such as PC's, Printers etc, are normally purchased via Panel Contracts. The current Panel Contract for Micro-Computers is PE30. This covers PC's, Printers, Software, etc.

2. Overview (cont'd)

Previously all purchasing was controlled by Department of Administrative Services (DAS). Even the larger Departments were required to use the Purchasing & Disposals Branch of DAS. Today only ADP and Hi-Tech purchases require referral to DAS. The Departments are only required to clear the Policy Requirements with DAS and DITAC (Department of Industry, Technology and Commerce) and to use where practicable existing "Common Item " Panel, Supply or Period Contracts which may be current.

The Policy requirements are fairly stringent however the enforcement of Department purchasing via existing Contracts is proving to be quite lax, with many Departments seeking to acquire these common items by extending Old Contracts. This applies where the incumbent Supplier is not listed on the current Panel Contract.

The new Policy with regard to Government Departments is to re-structure, with a stream-lined management. The management structure to be more responsible with the capacity to effect decisions relative to the daily operation and performance of the business.

There is currently debate as to whether the existing Threshold ($20,000AUD) should be raised to $100,000 or abolished altogether. With Departments now able to use their own Purchasing, Administrative and Technical resources to effect purchases, this will allow incumbent suppliers located in Canberra to become even closer to customer Departments.

Departments are increasingly issuing RFT's which are non specific and quite conceptual. Due to the lack of staff resources Departments are buying, Project Management Resources as part of the Tender Contract. A typical example of this is the Defence Departments acceptance of the IBM Tender Proposal in relation to the DESINE project. This is to update and manage the entire computer network for the Defence Department until 1994.

The restructuring of all the Departments has also resulted in some areas being responsible for the funding of their operation. The Financial Management Improvement Program (FMIP) now being implemented by the Government will require the Department of Administrative Services, Purchasing and Sales Group from July 1, to raise its operating funds from the Tender Contracts that are signed. Every contract that the Department signs on behalf of the Government for the supply of Common Items and Services will carry an amount which the supplier will pay to DAS against the value of purchases invoiced. The value currently being considered is 2-3%.

2. Overview (cont'd)

The Tender Contracts handled by Departments direct may also require this levy to be paid when DAS is involved. With the requirement to refer contracts in relation to Policy this may result in all contracts attracting this or some form of levy.

Departments will now be required to pay directly for the services provided by DAS. These include Technical, Administrative and Legal.

A statement as to the effects of this policy has yet to be made. This is unlikely before August 89.

Reference

Department of Administrative Services has its Purchasing and Sales Headquartered in Canberra and the General manager is Mr. Ross Pitt. Mr. Vladimir Shevchenko is the Assistant General Manager.

The ACT Operations Branch is responsible for ACT Purchases and Sales including all Panel and Period Contracts for Common Items. The Branch is managed by Mrs Mel Box (Manager Purchasing Services) and Mr. Paul Sweeney (Assistant Manager Purchasing Services).

3. Policy

The Federal Government has initiated a number of Policies designed to restructure the ADP, Telecommunications and Hi-Tech Industry in Australia. We have seen varying degrees of acceptance and support by Industry to these initiatives with corresponding results.

Partnership Policy

The most recent initiative is the Partnership Policy designed to encourage the transfer of technology from overseas to Australia. The Policy also requires the development of exports and allows foreign companies to spread their Offset Liabilities over 7 Years.

The need to put forward an Offsets Proposal against specific Contracts is also waived. The tendering company can under this Policy present it's Offsets Proposal some time after the Contract has been signed.

3. Policy (cont'd)

To date most of the companies involved in selling equipment to Government exceeding $2M AUD per annum have sought to qualify under the Partnership Policy.

Offsets Policy

The Offsets Policy requires that any supplier to the Government will be required to Offset 30% of the Contract Value where the Contract exceeds $2M AUD in any given 12 month period.

This only applies where the Local Content is less than 30% of the Contract Value. The Audit process for this is currently the responsibility of DAS Financial Services Branch.

Australian & New Zealand Manufactured Goods Preference Policy

This Policy gives preference to Goods manufactured in either of these two countries with a Local Content exceeding 30%. Adjustments are made to the Tender Prices of proposals that have higher imported content with a local content below the 30% threshold. However due to other issues including compatibility, conformity etc this Policy has often been ineffectual.

Industry Development Arrangements

These are covered in Section 2.3 of the Strategic Technology Management paper.

4. **Defence Offsets, Accreditation and Security Clearance Requirements**

Offsets

The Offsets Policy for Defence Contracts requires that there is a requirement to initiate as high as possible local content to the value of 30% or greater.
This requirement also assists in the transfer of Technology and expertise to facilitate on-going support with an acceptable level of independence in relation to on-going support.

The level of Offset Liabilities outstanding by foreign companies is proving to be an embarrassment. Todate the Liabilities exceed $2B AUD. The prospect of these Liabilities ever being met are very remote. The new Partnership Policy and IDA initiatives are intended to ensure that these liabilities do not increase further.

4. Defence Offsets (cont'd)

The level of Offsets Liability is the same as for other Government Purchases. ie;

The Offsets Policy requires that any supplier to the Government will be required to Offset 30% of the Contract Value where the Contract exceeds $2M AUD in any given 12 month period. This only applies where the Local Content is less than 30% of the Contract Value.

Accreditation

Overseas companies intending to sell to the Defence Department are required to be Accredited under the Australian & Overseas Companies Involvement (AOCI) scheme. The scheme requires that there will be an Australian Company (51% Australian equity) responsible for the Tender through which the overseas company can offer. The intention is to encourage joint venture participation with local companies and consortiums.

The Board of the local consortium must be predominantly Australian with representation from the overseas company requiring security clearance.

Manufacturing in Australia must be approved to AS1821 and AS1822 Standards.

Security Clearance

Both the local and overseas partners are required to be Security Cleared. Most NATO Security Cleared companies would be given clearance. Products offered by overseas and local companies are also treated in the same way.

Security clearance is also required for the company offices, and any area where information or designs are used or held.
Reference

Defence Communications Systems Division.

Mr. Ian H. Maggs	General Manager.
Dr. Ross Sidney	Manager Communications Systems Planning.
Mr. Max Beveridge	Manager Purchasing & Supply.

5 COCOM

Australia became a member of COCOM on 10th April 1989. This International Agreement is an informal group of all the NATO countries (excluding Iceland) plus Japan and Australia. The group is based in Paris and meets to discuss the interchange of technology and the sale, transfer of technology including products to the Eastern Block.

As a consequence of Australia becoming a member, there is less restriction on the transfer of technology to Australia from NATO countries. However, there are now some new controls on the export of hi-tech products and technology from Australia.

The following publications available from the Australian Government Publishing Service (AGPS) may be of interest and reference:

Gazette No P6 dated 23/3/89

A Guide to Importers and Exporters of Technology to Australia

Australian Controls on Export of Technology (a new publication available in about two weeks)

6 Tender Procedures

The formation of the new Super Departments has resulted in the amalgamation of several smaller Departments. These smaller Departments still operate under their own identity however are becoming increasingly controlled by their parent Department.

The Super Departments are setting up their own Purchasing Administration and Tender Review Committee's. This has resulted in an increase in Tender Contracts handled through Regional Offices and also in the value of these Contracts. Previously any Tender in excess of $250,000 AUD was issued by Canberra. This was raised to $500,000 AUD in 1986 and today contracts exceeding this are being handled through Regional Centres.

However the main RFT's are still issued from Canberra. With the rationalisation and efficiency programs currently being implemented in all Departments we will see Policy and Management Control being centred in Canberra. The integration of the smaller Departments into this infra-structure is already occurring. Consequently we are seeing Tenders being issued which cover the requirements of several Departments.

There are several types of Tender Contract. The main Contract Types are:

Period Contract
Runs for a specified period 1Yr, 2Yrs etc.

Supply Contract
General Contract which allows Departments to purchase of that contract for the life of the contract.

Panel Contract
Runs for a specific period and covers Common Use Items. Successful Tenderers are then listed and can sell to Government Departments within the Frame of the Tender.

If should be noted that ADP Period Contracts in recent years have tended to be restricted and therefore only applicable to the Department specified on the Contract.

Detailed Information on all Government Departments, including the Minister responsible and Department Management is available in Directory Form and titled " National Guide to Government". Copies can be obtained from:

Information Australia Group Pty. Ltd.
45 Flinders Lane,
Melbourne.
Victoria. 3000.

Tel. (03) 654 2800

Alternatively The Australian Government Publishing Service runs Book Shops in all capital cities and major centres.

The "Directory of Government " is available from these outlets. It should be noted however that they are different publications. The latter containing less biographical information on ministers etc.

APPENDIX A

List of Provisions - Telecommunications Bill 1989

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

HOUSE OF REPRESENTATIVES

(As read a first time)

TELECOMMUNICATIONS BILL 1989

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2,040/13.4.1989—(46/89)—Cat. No. 89 4334 2

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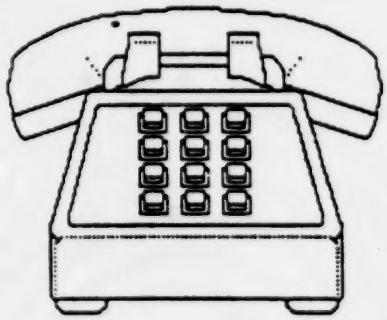
APPENDIX B

New Industry Development Arrangements - CPE

New Industry Development Arrangements



Customer Premises Equipment

12 May 1989

Department of Industry, Technology and Commerce
Department of Transport and Communication

CUSTOMER PREMISES EQUIPMENT SECTOR (CPE):- OPERATIONS OF THE POINTS SCHEME

This Booklet provides a guide to the new Industry Development Arrangements (IDAs) to apply to the supply of certain Customer Premises Equipment (CPE) with effect from 1 July 1989. For the purposes of these arrangements CPE covers only the first telephone, small business systems (SBS), private automatic branch exchanges (PABX) and cellular mobile telephones (CMT). Product definitions are at Annex 1.

The IDAs do not cover questions of technical standards, installation and maintenance which are covered in relevant Telecom publications and regulations.

This is the second version of the booklet and incorporates a number of changes from the earlier version in clarifying the treatment of imports and the measurement of turnover.

INTRODUCTION

Under the new Industry Development Arrangements a points scheme will be introduced under which authorisation to connect CPE products to the public telecommunications network will be restricted to those firms meeting industry development criteria relating to research and development, exports and Australian production.

Existing suppliers of CPE products from 1 July 1989 will be required to achieve a specific number of points, through performance in these areas, in order to obtain authorisation. The IDAs will replace the existing arrangements currently administered by Telecom.

New entrants and existing suppliers wishing to market new products will need to comply with the new arrangements from 1.1.1989 in order to obtain authorisation.

The points scheme will operate to 30 June 1993 and will be administered by the proposed Australian Telecommunications Authority (AUSTEL).

POLICY RATIONALE

The arrangements currently applying to CPE have been dominated by Telecom's purchasing policies with a resultant impact on the industry's development. As a result CPE production in Australia has largely been geared to servicing the domestic market and has been subject to limited import competition. Changes in Telecom's regulatory environment, as announced in the May 1988 Statement on Telecommunications, has meant that the CPE sector will have to operate in more competitive markets both here and overseas.

The new IDAs are designed to provide a transition period for the sector to adjust from the present regulatory environment to a more liberalised environment after 30 June 1993. They were developed following an extensive process of consultation with a wide range of interested parties.

By encouraging greater local product development and exports the industry will be able to move to a position where it can compete internationally, consistent with the directions of the Information Industries Strategy. The Strategy, released in September 1987, is a long term development package for the information industries, of which the CPE sector is one part, and comprises a range of initiatives designed to foster a more innovative and dynamic industry, closely integrated with international markets and developments.

BACKGROUND

Under the points scheme firms will have to achieve minimum aggregate levels of points in each year to receive authorisation from the Australian Telecommunications Authority (AUSTEL) to connect their equipment to the public telecommunications network. Suppliers must also comply with the required technical conditions and standards as outlined in relevant Telecom specifications.

Points will be gained for performance in Australian production, research and development (R&D) and exports across a firm's CPE range and equal weightings, to a maximum of 100 points, are accorded each of these three factors. The maximum possible aggregate score is 300.

Definitions of R&D, exports, Australian production, turnover as they apply to the points scheme are at Annex 2.

Points for R&D will be allocated on a pro rata basis of 20 points for each 1% of a firm's turnover devoted to R&D on solely CPE, to a maximum of 100 points. Similarly points obtained from exporting would be allocated on a pro rata basis of 5 points for each 1% of CPE turnover exported, to a maximum 100 points. Firms are not precluded from undertaking activity in excess of this although no additional points will be achieved.

Australian production will be calculated on the basis of ex-factory costs and points are obtained on the following basis

FT		PABX/SBS		CMT	
Level of prod		Level of prod.		Level of prod.	
<25%	0	<15%	0	<15%	0
25%	50	15%	50	15%	50
>50%	100	>35%	100	>25%	100

The calculation of Australian production will cover those genuine costs incurred in the manufacturing process and include the cost of any imported componentry and finished products (on an into-store basis). Such items as sales and marketing costs are excluded. In the case of CMT batteries are excluded from the calculation of Australian Production as they are a consumable product and are not of an integral nature.

Points will be allocated on a pro rata basis for production between the minimum and maximum thresholds. For multi product firms points would be determined on the basis of a weighted average across the points attained from Australian production of the individual CPE products.

THRESHOLDS

The one aggregate points threshold (the minimum level of activity required to obtain approval for attachment) applies to all four CPE products and will progressively increase under the scheme. Approval to attach to the network for the forthcoming year will be dependent on performance in the current year.

For the first year of the scheme, commencing 1 July 1989, existing suppliers will need to have satisfied during 1988/89 the currently applicable Telecom arrangements (unless they elect to move to the new scheme before 1 July 1989 - see EXISTING SUPPLIERS). For approval to attach for 1990/91 all firms would be required to achieve a minimum of 140 points across their CPE operations, averaged over the 1989/90 year. In 1991/92 the threshold would be increased to 170 points, averaged over the 1990/91 year. The threshold for 1992/93 will be 200 points averaged over performance in the 1991/92 year.

It is entirely a matter for the supplier as to the manner in which the threshold is achieved.

Performance will be assessed annually on the basis of independent audits of a firm's CPE activities, and will be conducted as soon as possible at the conclusion of each financial year.

TREATMENT OF NEW ENTRANTS

General

New suppliers to the CPE market (that is any firm other than an existing approved supplier) will have to meet the IDAs to obtain endorsement as an approved supplier. The potential entrants would need to provide a detailed plan of their proposed operations indicating how they are going to achieve the required threshold for the year of their entry (ie where a firm is proposing to enter the CPE market in Year 3 it would need to indicate how it was going to achieve 170 points). A suggested format for applying for endorsement is at Annex 3.

The plan would be assessed by the administrative body who would then advise on approval. Where an application is unsuccessful the applicant will, under the legislation establishing AUSTEL, have the right to appeal to the Administrative Appeals Tribunal.

An interim audit may be undertaken during the year of entry to ascertain progress towards achieving the threshold.

New Entrants prior to 1 July 1989

For new entrants, prior to 1 July 1989, a detailed plan would be required covering proposed activities up to 30 June 1990 and indicating how the Year 1 threshold of 140 points will be attained. Activities undertaken prior to 1 July 1989 will need to be consistent with the firm's long term strategic directions. Assessment of a firm's performance would be from the date of commencement to 30 June 1990 and an interim audit on progress towards attaining the points threshold would be undertaken during 1989/90.

Approval to supply for year 2 will be a matter for AUSTEL to assess and will depend on performance against the submitted plan. Failure to perform in accordance with the plan will result in the withdrawal of endorsement.

Applications in the period prior to AUSTEL's establishment (ie to 1 July 1989) should be submitted in the first instance to the Regulatory Directorate, Telecom.

EXISTING SUPPLIERS

Firms currently endorsed by Telecom to supply CPE products have the option of:

- continuing under the terms of their existing Telecom endorsement, which as a result of the new arrangements are in all cases due to cease on 30 June 1989,

    . prior to July the supplier should write to AUSTEL requesting a continuation of their endorsement, along with providing a certification that they have read and understood the new IDAs and will meet the points threshold for 1989/90 or;.

- applying for endorsement under the new arrangements on the same basis as new suppliers; a plan must be submitted indicating how the firm will achieve the year 1 threshold of 140 points over the period to 30 June 1990. In these circumstances the firm's entire CPE product range will be assessed; a multi-product firm will not be able to be simultaneously endorsed under the existing arrangements for one product and under the new IDAs for another.

    . those existing suppliers who wish to diversify into another CPE product category will need to take this option in order to gain endorsement.

TREATMENT OF IMPORTS OF FINISHED PRODUCTS

Unlike the previous arrangements access to the Australian market for imported products will be allowed over the transition period. However imported finished products will be included in the measurement for Australian production and turnover, thereby increasing the effort required to achieve points in respect of Australian production, exports and R&D. Any decision to import will therefore need to balance the impact on the various components of the scheme and be governed by the need to ensure the firm's operations continue to meet the points threshold. Should for example a significant devaluation occur then any increase in the price of imported products, including components, will need to be taken into account in determining the extent to which a firm can import.

Imports will be measured on an into-store basis, that is customs duty and freight are included in the valuation. Those firms who rely on a third party to undertake their import activities (ie a specialised importer/distributor) should ensure they obtain relevant import documentation which provides the necessary information.

Aggregate import levels will be monitored closely to ensure that developments in this area are consistent with the industry's likely import entitlement. Where on the basis of available evidence AUSTEL considers a firm is importing at a level significantly higher than its likely entitlement and will as a result be unable to meet the points threshold AUSTEL would be empowered to withdraw the firm's endorsement.

ADMINISTRATION

AUSTEL will from its establishment on 1 July 1989 have responsibility for the administration of the scheme including commenting in its Annual Report on performance under the scheme. The Department of Industry, Technology and Commerce (DITAC) will assist in monitoring the scheme to ensure developments within the sector are consistent with the Information Industries Strategy.

Prior to AUSTEL's establishment the Department of Transport and Communications will administer the scheme in close consultation with DITAC. Applications should in the first instance be submitted to the Regulatory Directorate, Telecom. Relevant adressess and contact numbers are at Annex 4.

In order to ascertain whether suppliers are fulfilling the requirements of the points scheme AUSTEL will have responsibility for ensuring that independent audits are undertaken at the end of each financial year of a firms performance. Where appropriate, interim audits will be undertaken in the case of new suppliers. Firms will be liable for the costs of these audits on a full cost recovery basis as is the current practise under existing Telecom arrangements.

PERIOD OF ENDORSEMENT

For existing suppliers endorsement will be granted for a period of twelve months commencing on the 1st of July. It will be renewed on application at the expiration of each financial year provided:

- the supplier has complied with all conditions for endorsement;and
- this has been certified via the undertaking of an independent audit.

For a new supplier the initial period of endorsement would be dependent on the administrative bodies determination, taking into account the timing of the application for endorsement. For example if an application is made early in a financial year endorsement would in normal circumstances be for the remainder of that financial year.

APPROVAL OF ENDORSEMENT

Endorsement of existing suppliers for year 1 (1989/90) will be dependent on advice from Telecom that the firm has satisfied the existing arrangements as at 30 June 1989. For year 2 and subsequent years approval will be subject to the conduct of an independent audit.

For new suppliers and those existing suppliers wishing to move to the new arrangements prior to 1 July 1989 approval for 1989/90 will be on the basis of an assessment of a detailed plan.

WITHDRAWAL OF ENDORSEMENT

Failure to meet the requirements of the scheme (ie the relevant points threshold) would lead to automatic withdrawal of approval to attach to the network. Where a firm has had its endorsement withdrawn the earliest year for which it can apply for re-endorsement will be the following year (ie where a firm fails to meet the requirements for year 1 the earliest year it can apply for re-endorsement is year 3).

In applying for re-endorsement a firm will be treated as a new supplier, ie it will need to submit a detailed plan indicating how it is going to meet the relevant threshold for the year of its proposed entry.

Change of ownership does not affect a firm's obligations under the scheme. Suppliers may exit the market voluntarily and if they do so endorsement will be withdrawn. If the firm wishes to apply for re-endorsement the same conditions as above apply.

Where a supplier's endorsement is withdrawn arrangements will be entered into covering the maintenance etc of existing equipment to ensure users are not penalised.

FORM OF APPLICATION FOR NEW SUPPLIERS

Although there is no specific form to complete to apply for endorsement certain information is required for consideration. This includes providing the business name and address of the company, an acknowledgement that senior company representatives have read and understood the Industry Development Arrangements applying to CPE and the conditions therein, advice on desired commencement date of endorsement and appropriate company contact points.

Annex 3 provides a format that should be followed in preparing the detailed plan that must accompany an application..

TREATMENT OF NEW ZEALAND

Under the arrangements any New Zealand production in a finished product would be included for the purposes of calculating Australian production (that is only that part of the item's cost which represents New Zealand production). However to prevent double counting any New Zealand content in an export to that market would be subtracted from the calculation of export value. Research and development undertaken in New Zealand or exports from New Zealand to a third country are not included under the arrangements.

ARRANGEMENTS TO APPLY FROM 1 JULY 1993

Following the termination of the scheme at close of business 30 June 1993 the operative form of assistance will be the tariff. Currently the tariff is 23% and is scheduled to phase down to 15% by 1993.

ANNEX 1

DEFINITIONS OF THE FOUR CPE PRODUCTS
SUBJECT TO THE NEW INDUSTRY DEVELOPMENT ARRANGEMENTS

FIRST TELEPHONES

Telephones supplied under contract to Telecom for their provision to the marketplace on an exclusive basis as the first instrument associated with a telephone service. Any telephones not supplied as first telephones are defined as additional telephones and therefore are not subject to the IDAs. Telecom's monopoly on the provision of first telephones will be reviewed by 31 December 1990 and a decision of its continuation will be made by 30 June 1991. Any implications for the IDAs will be determined at that time.

PRIVATE AUTOMATIC BRANCH EXCHANGES (PABXs)

A customer switching system, other than an SBS.

SMALL BUSINESS SYSTEMS (SBS)/KEY SYSTEMS

A customer switching system capable of identifying to each user which line they are currently using. Each keyset or instrument is capable of "picking up" or initiating a call on any line and of transferring calls. Further, SBS's are distinguishable from "additional telephones" in that the SBS keysets only work when integral to the system.

CELLULAR MOBILE TELEPHONES (CMTs)

Any product that connects with Telecom's MobileNet services.

ANNEX 2

DEFINITIONS OF R&D, EXPORTS AND AUSTRALIAN PRODUCTION

R&D has to be eligible expenditure under Section 73B, Sub-Section 1 of the Income Tax Assessment Act 1936. R&D will be accepted on the basis of the claim for R&D made on a company's taxation return. The following extract from the legislation defines R&D activities as:

"(a) systematic, investigative or experimental activities that -

(i) are carried on in Australia or in an external Territory;

(ii) involve innovation or technical risk; and

(iii) are carried on for the purpose -

(A) of acquiring new knowledge (whether or not that knowledge will have a specific practical application); or

(B) creating new or improved materials, products, devices, processes or services; or....

As a guide to delineating R&D activities, if the primary objective is to make further technical improvements to a product or process, then the work constitutes development. However, if the product, process or approach is substantially set and the primary objective is to develop markets, do pre-production planning or get production working smoothly, then the work is no longer development.

Examples of work that may be included under paragraph (B) of the definition provide they are directly related to R&D activities, are:

- industrial design;
- engineering design;
- production engineering;
- operations research;
- mathematical modelling and research;
- computer software development;
- design, construction and operation of prototypes; and
- pilot plant (to a limit of $10m).

The legislation specifically excludes certain types of activities including:

- market research;
- quality control;
- cosmetic modifications or stylistic changes;

Australian production is defined as total Australian production value (including both imported components and finished products) less imported content and will be measured across a firm's CPE product range. The production values include those costs incurred by the manufacturer, in Australia, in connection with the process or processes involved in the manufacture of the equipment including approved production undertaken by sub-contractors. This would include expenditure incurred in the training and skills upgrading of employees. Imports are valued on an into-store basis, that is customs duty and freight costs are included in the valuation.

In the case of CMT batteries are not included in the measurement of Australian Production as they are a consumable product.

Where other than CPE production is undertaken at the firm, eligible factory overhead charges would be accepted on the basis of apportionment to CPE production. New Zealand production in a finished product would be included for the purposes of calculating Australian Production.

Exports are defined as CPE goods, materials or articles sold outside Australia which have been produced, manufactured or partly manufactured in Australia excluding re-exports and are valued at free-on-board. Exports of CPE products would need to have an average Australian production value at least equivalent to the minimum level required to obtain points under the Australian production requirements. Exports are measured at that point when they are sold outside the firm.

To prevent double counting any New Zealand content in an export to that market would be subtracted from the calculation of export value.

Turnover includes sales (exclusive of excise and sales tax) of CPE goods whether produced by the company or not; bounties and subsidies on production; all other operating revenue; capital work done for rental or lease. Excludes receipts from interest, royalties, dividends, and the sale of fixed tangible assets.

The selling price of a CPE product is calculated at that point when it is sold outside the company (company including any subsiduaries such as distribution outlets). For example where a company sells a CPE product direct to the final user (be it straight from the factory or through its own distribution/dealership network) the value of the product is measured as the selling price to the final user. On the other hand if the manufacture sells the product to an independent distributor who then onsells it, the value of the product to the manufacturer is the selling price to the distributor.

ANNEX 3

SUGGESTED FORMAT FOR MAKING AN APPLICATION FOR ENDORSEMENT AS A SUPPLIER OF CUSTOMER PREMISES EQUIPMENT UNDER THE NEW INDUSTRY DEVELOPMENT ARRANGEMENTS.

1. COVERING LETTER

. Addressed to the Regulatory Directorate, Telecom

. Contain the following

-an undertaking that the IDAs have been read and understood and that the firm will meet the relevant threshold for the year of entry

-specify the date endorsement is sought from

-a company contact officer for these matters

. The letter should be signed by a senior official of the firm with the authority to commit the company to the undertakings required by the IDAs.

2. PLAN OF CPE OPERATIONS

(The financial figures required below should relate to the year of entry, although future year figures can also be provided where available)

. Outline of the firm's overall corporate strategy, including where available an indication of the firm's structure (eg operating divisions etc)

. CPE operations

-linkages with the overall corporate strategy

-products to be supplied

-details of CPE operations, including plant location, employment, whether any sub-assembly undertaken by contractors, etc

-whether a ramping up period is envisaged (ie a gradual gearing upto domestic production)

. Australian Production

-breakdown of financial figures (by financial year) of estimated ex-factory costs of production including imported components/finished CPE products, local content (materials, labour) and factory overheads.

-specific details on the planned importation of any finished products

-for completely new suppliers to the Australian CPE market information should be provided on when the various activities associated with manufacturing will

. Research and Development

-expected R&D expenditure on CPE

-the nature of the R&D that will be undertaken with an indication of when the various activities will commence

-the link with future production/export activities

. Exports

-estimated volume/value of CPE exports and their destinations

-future prospects

-whether sold to a distributor or exported through the firm

-whether sub-assemblies or finished products

. Turnover

-estimated CPE turnover

. Estimated overall points scored for year of entry

-Australian Production

-R&D

-Exports

ANNEX 4

CONTACT NAMES AND NUMBERS FOR THE NEW INDUSTRY DEVELOPMENT ARRANGEMENTS APPLYING TO CPE

DEPARTMENT OF TRANSPORT AND COMMUNICATIONS

Telecommunications Policy Division
1st Floor, 12 Mort St, Canberra City.

GPO Box 594, Canberra City, ACT 2601

Contact: Tom Dale
(062) 679024
Fax: (062) 679893

DEPARTMENT OF INDUSTRY, TECHNOLOGY AND COMMERCE

Light Industries Division
Information Industries Branch.
4th Floor, Building 4, 51 Allara St, Canberra City.

GPO Box 9839, Canberra City, ACT 2601.

Contact: Alex Gosman
(062) 761861
Fax: (062) 761943

TELECOM

Director
Regulatory Directoriate
13 th Floor, 500 Collins St
Melbourne Vic 3000

Contact: Jim Holmes
(03) 6067967
Fax: (062) 6297860

ANNEX 5

OPERATIONS OF THE POINTS SCHEME

Weightings

Research and Development (R&D)	100
Exports	100
Australian Production	100

Threshold

Year commencing	CMT	SBS/PABX	ST
	Performance required in previous year		
1 July 1989	existing supplier eligibility		
1 July 1990	140	140	140
1 July 1991	170	170	170
1 July 1992	200	200	200

Calculation of R&D

Allocated on a pro rata basis of 20 points for each 1 per cent of company turnover on CPE.

Calculation of Exports

Allocated on a pro rata basis of 5 points for each 1 per cent of turnover exported

Calculation of Australian Production (AP)

$$AP = \frac{\text{Total firm production value - imported value}}{\text{Total firm production value}}$$

ST		PABX/SBS		CMT	
<25%	0	<15%	0	<15%	0
25%	50	15%	50	15%	50
>50%	100	>35%	100	>25%	100

Points will be allocated on a pro-rata basis for production between the minimum and maximum thresholds.

APPENDIX C

List of Submissions to the Saunderson Committee

SUBMISSION LIST

INQUIRY INTO NEW BROADCASTING-RELATED SERVICES

NUMBER	NAME AND ADDRESS	DATE RECEIVED
1	Australian Broadcasting Tribunal PO Box 1308 NORTH SYDNEY NSW 2059	10 March 1989
2	The Australian Children's Televison Action Committee 569 Nicholson Street NORTH CARLTON VIC 3054	16 February 1989
3	Public Broadcasting Association of Australia 645 Harris Street ULTIMO NSW 2007	17 Februry 1989
4	Family Broadcasting Network 39 Norman Avenue AUBURN NSW 2144 PO Box 233 PARRAMATTA NSW 2154	17 February 1989
5	Independent Television Newcastle 41-45 Newcomen Street NEWCASTLE NSW 2300	20 February 1989
6	Television Unlimited PO Box 249 FITZROY VIC 3065	20 February 1989
7	Telecom Australia Pay TV Task Force Corporate Strategy 3/191 Queen Street MELBOURNE VIC 3000	28 February 1989
8	Australia's National Satellite System AUSSAT 54 Carrington Street SYDNEY NSW 2000	28 February 1989
9	Department of Transport Communications GPO Box 594 CANBERRA ACT 2601	1 March 1989

NUMBER	NAME AND ADDRESS	DATE RECEIVED
10	Government of Western Australia Office of the Premier 197 St George's Terrace PERTH WA 6000	2 March 1989
11	Federation of Australian Radio Broadcasters 8 Glen Street MILSONS POINT NSW 2061	3 March 1989
12	Australian Telecommunications Users Group PO Box 357 MILSONS POINT NSW 2061	6 March 1989
13	Australian Film Television and Radio School AFTRS Cnr Balaclava Raod and Epping Highway (PO Box 126) NORTH RYDE NSW 2113	6 March 1989
14	Scientific Atlanta Pty Ltd Unit 2, 2 Aquatic Drive FRENCHS FOREST NSW 2086	8 March 1989
15	Network TEN Australia Pty Ltd Pittwater and Epping Roads NORTH RYDE NSW 2113 PO Box 10 LANE COVE NSW 2066	10 March 1989
16	Integrated Communication Limited AMP Building 2 Trentwood Avenue MELBOURNE VIC 3104	14 March 1989
17	AAP Reuters Communications Pty Ltd Incorporated in NSW 30 Ross Street GLEBE NSW 2001	14 March 1989
18	Australian Broadcasting Corporation GPO BOX 9994 SYDNEY NSW 2001	14 March 1989

NUMBER	NAME AND ADDRESS	DATE RECEIVED
19	Federation of Australian Commercial Television Stations (FACTS) 44A Avenue Road MOSMAN NSW 2088	15 March 1989
20	Department of Aboriginal Affairs MLC Tower Building PHILLIP ACT 2606	15 March 1989
21	Australian Writers Guild 60 Kettett Street KINGS CROSS NSW 2011	15 March 1989
22	Mr R J Rowe Richard J Rowe and Associates Pty Ltd PO Box 105 MOOLOOLABA QLD 4557	15 March 1989
23	Communications Consultants Pty Ltd 22 Everton Road STRATHFIELD NSW 2135	17 March 1989
24	Touche Ross Services Pty Ltd Rialto 525 Collins Street MELBOURNE VIC 3001	21 March 1989
25	*	
26	Australian Record Industry Association Ltd 249 Pitt Street SYDNEY NSW 2000	4 April 1989
27	Totalizator Agency Board of NSW 495 Harris Street ULTIMO NSW 2007	4 April 1989
28	Australian Association of National Advertisers 388 George Street SYDNEY NSW 2000	6 April 1989

* The submissions from the Communications Law Centre, made on different dates, have been consolidated into one submission, No 35.

NUMBER	NAME AND ADDRESS	DATE RECEIVED
29	Department of Transport and Communications GPO Box 594 CANBERRA ACT 2601	6 April 1989
30	Telecom Australia 3/191 Queen Street MELBOURNE VIC 3000	6 April 1989
31	Department of Transport and Communications GPO Box 594 CANBERRA ACT 2601	6 April 1989
32	Australia's National Satellite System (AUSSAT) 54 Carrington Street SYDNEY NSW 2001	6 April 198
33	Australian Council of Trade Unions (ACTU) 'ACTU HOUSE' 393-397 Swanston Street MELBOURNE VIC 3000	10 April 1989
34	*	
35	Communications Law Centre University of NSW PO Box 1 KENSINGTON NSW 2033	12 April 1989

* The submissions from the Communications Law Centre, made on different dates, have been consolidated into one submission, No 35.

NUMBER	NAME AND ADDRESS	DATE RECEIVED
36	Broadcast Technical Services Pty Ltd 8 Eastview Avenue NORTH RYDE NSW 2113	21 April 1989
37	Hoyts Entertainment Limited Triple M Tower Level 25, 500 Oxford Street BONDI JUNCTION NSW 2022	18 April 1989
38	Amos Aked and Swift Pty Ltd 1st Floor 484 Kent Street SYDNEY NSW 2000	24 April 1989
39	Scientific Atlanta Pty Ltd Unit 2, 2 Acquatic Drive FRENCHS FOREST NSW 2086	24 April 1989
40	Communications Law Centre University of NSW PO Box 1 KENSINGTON NSW 2033	24 April 1989
41	Public Broadcasting Association 645 Harris Street ULTIMO ,NSW 2007	24 April 1989
42	Australian Caption Centre 1st Level, Fortune House 88-90 Foreaux Street SURRY HILLS NSW 2010	4 May 1989
43	Independent Television Newcastle 41-45 Newcomen Street NEWCASTLE NSW 2300	3 May 1989
44	Australian Writers Guild 60 Kellett Street KINGS CROSS NSW 2011	1 May 1989
45	AAP Reuters Communications Pty Ltd Incorporated in NSW 30 Ross Street GLEBE NSW 2001	9 May 1989
46	Telecom Australia 3/191 Queen Street MELBOURNE VIC 3000	8 May 1989

APPENDIX D

Extract of the Report on the Standing Committee examining the Introduction of Pay TV in Australia

4.7 The Department suggests that while it is possible for the government to prescribe delivery systems this 'would inevitably have some significant commercial implications which would be difficult to assess' because there are too many unknowns.[3] The Department said that a more appropriate approach would be for operators to be licensed to provide services without specification of delivery systems to be employed. That decision should be left to the licensee.[4]

4.8 Some submissions to the Committee, including particularly that from the Communications Law Centre (CLC), have argued that provision should be made in the establishment of pay tv for the availability of channel capacity for public, educational and government use. The Centre asked the Committee to adopt the following objective of broadcasting-related services: 'ensuring the genuine diversity of programming, to include the potential for local originated, community programming, and educational, informational and children's programming'.[5]

4.9 Arguments in support of some government intervention come together quickly into two inter-related issues. The first is what governments wish to achieve from pay tv or its regulation which is a relevant issue needing debate at the outset. The second and related issue is whether commercial objectives should be the sole determinant of the manner in which pay tv should be introduced and managed in Australia.

4.10 In chapter 3 the Committee has argued that pay tv is much more than a commercial product. If managed properly it offers significant opportunities for promoting the plurality of views in Australian society by increasing diversity of ownership and diversity of non-commercial programming. Thus the Committee agrees with the views and sentiments expressed in the CLC submission and the Tribunal's 1982 CSTV report. It should be recognised, however, that selecting a system that delivers such non-commercial goals is something the market cannot achieve. Hence the need for government to select and nominate the system(s) to be used to deliver pay tv.

4.11 The Department hedges its bets on the role of government in selecting a delivery system. Its February 1989 report and later explanation of it advocated a market solution. This later explanation also recognised that having local and community programming 'is a very desirable element to have in a pay television service' and that decision-makers may need some guidance on the mechanisms that might be used. DOTAC now wants the pay tv operator to choose the delivery system 'as far as possible'.[6]

Selecting Delivery Systems: The Criteria

4.12 The Committee uses five criteria in its selection of the most appropriate pay tv delivery system for Australia. These are:

(a) number of channels;

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[3] 1989 Pay TV Report, p.140 and Transcript of 31 July 1989, p.586.
[4] 1989 Pay TV Report, p.140.
[5] Submission no 35, pp.7,12.
[6] Transcript of 31 July 1989, pp.584-594.

(b) costs to the subscriber;

(c) universality of access and timing;

(d) diversity of ownership; and

(e) capability to accommodate more advanced systems.

4.13 It was said earlier that the survival of pay television will depend on whether the consumer (viewer/subscriber) believes he or she is getting or will get value for money. Thus at minimum, pay tv has to be sufficiently different from broadcast television, both commercial and national. Channel capacity is crucial to the task of differentiation because it can promote diversity of program choice. The number of channels is also important in that a sufficient number can permit local and community programming, another aspect of diversity of choice. A large number of channels increases the potential for competition and reduces the cost of the delivery system to the subscriber.

4.14 While the number of channels available and the costs to the subscriber can be considered to be primary factors in the Committee's deliberations, another criterion is universality of access to pay tv facilities and the timing of that access. There has been a number of views which reflect concern that access be as universal as practicable, both from the point of view of consumers (that access be as widely available as possible) and potential service providers (that there be a sufficient number of subscribers to render their investment viable).

4.15 The potential for increasing diversity of ownership is another criterion used in the selection process. It is related to the policy objective of preventing undue concentration of broadcasting services. Suffice it to say that because of its capacity to influence public opinion there are special rules for broadcasting and pay tv comes under or should come under the new definition of broadcasting.

4.16 Interactive services permit the introduction of services such as game and quiz shows with the home audience participating directly in the program. Services which are essentially unrelated to television such as electronic banking, security, home shopping and educational services may also be offered.[7]

4.17 Such services are beneficial but cannot be included as a determining factor in selecting a delivery system because it is doubtful if the argument can be sustained that their introduction depends on the introduction of pay tv. Nevertheless their introduction could be advanced by cable television.

4.18 In the event of all delivery systems not meeting the criteria, or not meeting them adequately, the initial or feeder technology would have to be specified - e.g. cable/MDS. But obviously any one system would not be able to serve all of Australia so that in some areas there would be one system and in other areas another - a hybrid. For example, in the remote areas or sparsely populated areas the type of system used would be determined mainly by the availability of the technology.

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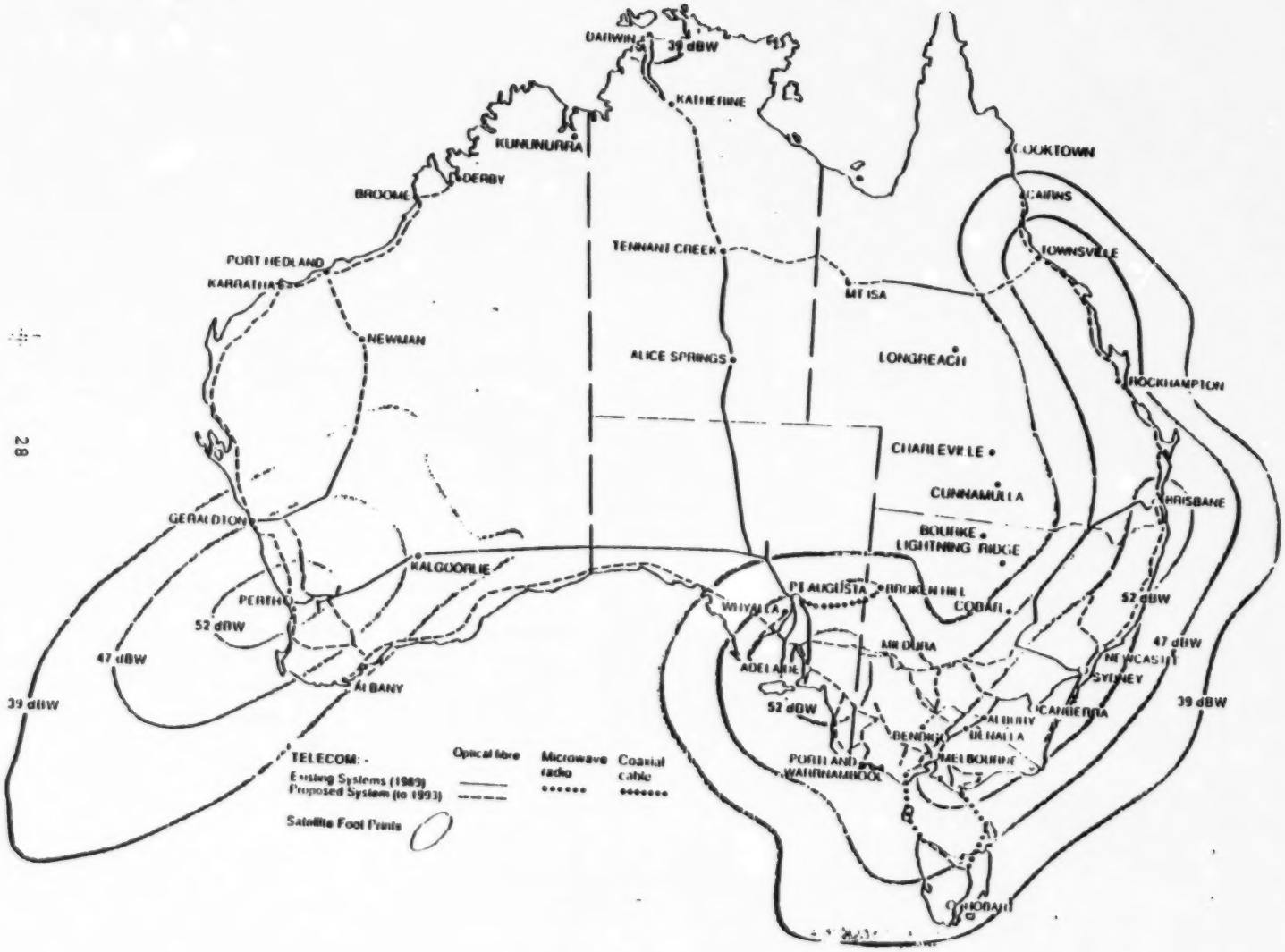
[7] The 1989 Pay TV Report, p 16.


DARWIN
39 dBW
KATHERINE
KUNUNURRA
DERBY
BROOME
PORT HEDLAND
KARRATHA
NEWMAN
TENNANT CREEK
MT ISA
COOKTOWN
CAIRNS
TOWNSVILLE
ROCKHAMPTON
ALICE SPRINGS
LONGREACH
CHARLEVILLE
CUNNAMULLA
BRISBANE
BOURKE
LIGHTNING RIDGE
GERALDTON
KALGOORLIE
PERTH
PT AUGUSTA
BROKEN HILL
WHYALLA
COBAR
52 dBW
47 dBW
39 dBW
ALBANY
ADELAIDE
MILDURA
NEWCASTLE
SYDNEY
CANBERRA
ALBURY
DENILIQUIN
ULMARRA
PORTLAND
WARRNAMBOOL
MELBOURNE
HOBART
TELECOM: -
Existing Systems (1989)
Proposed System (to 1993)
Optical fibre
Microwave radio
Coaxial cable
Satellite Foot Prints

COMPARATIVE ADVANTAGES OF DELIVERY SYSTEMS

DELIVERY SYSTEM / CRITERIA	UHF	MDS	DBS	CABLE	CHOICE (Cable/MDS)
Effects of the Number of Channels	Number : 1 Diversity : Limited Localism, etc : Limited Potential for Competition : None **P**	Number : 3 to 10 (a) Diversity : Satisfactory Localism, etc : Satisfactory Potential for Competition : Satisfactory **S**	Number 6 Diversity Satisfactory Localism, etc : None Potential for Competition : Satisfactory **S**	Number : 40 (b) Diversity : Excellent Localism, etc : Excellent Potential for Competition : Excellent **E**	Same ratings as for MDS. The major difference is that the hybrid offers a start-up in 1991 with a later switch to full cable thus achieving all the high ratings for cable whilst avoiding the poor rating on universality of access and timing.
Investment Costs to Subscriber	Low **G**	Medium $540-$820 (c) **S**	Medium $520-$1000 (d) **S**	Medium **S**	
Universality of Access and Timing	Reach : 96% (e) Start : June 1991 (f) Coverage 96% **G**	Reach : 100% Start : June 1991 (g) Coverage Progressive (h) **G**	Reach 94% Start : April 1992 Coverage : 94% **G**	Reach : 60% (i) Start : 1994-95 Coverage : Progressive (j) **P**	
Potential for Increasing Diversity of Ownership	Good (k) **G**	Good (l) **G**	Limited (m) **P**	Good (n) **G**	
New Services Capability	None **P**	None **P**	None **P**	Yes **G**	

NOTES:

(a) from 3 or more in capital cities to 10 in areas where no other MDS services compete for frequencies
(b) co-axial, unlimited with fibre optic
(c) Submission No. 49
(d) Submission No. 80
(e) as for free-to-air, percentage of population
(f) 18 months from date of decision, ie 1.1.90
(g) as for UHF
(h) depends on investment decisions
(i) major metropolitan and provincial centres
(j) 60% unlikely before 2000
(k) based on existing service areas about 40 markets
(l) as for UHF
(m) national market
(n) as for UHF

The ratings are as follows:
P - poor, **S** - satisfactory, **G** - good and **E** - excellent.

Selecting Delivery Systems: The Options - (a) UHF

4.19 UHF broadcast transmission can be delivered as a radiated terrestrial service with the signal encoded to ensure that only subscribers can view the picture. It would probably be limited to one channel in most areas achieving 96% penetration starting from about eighteen months after a decision was made to proceed with pay tv.* The eighteen month period is required to enact legislation, define licence areas and process licence applications which are factors which would affect any of the options of delivery. They would be critical presumably only for technologies which are available now - UHF and MDS

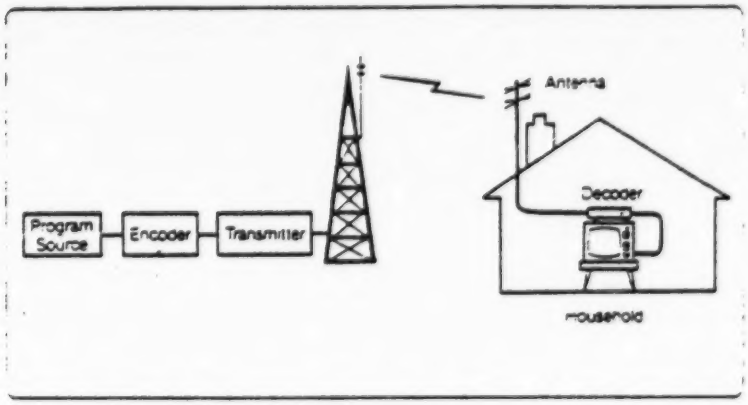


Figure 3.2 Diagrammatic explanation of pay television provided via RSTV

Source: The 1989 Pay TV Report, p. 18

4.20 Submissions to the Committee were divided on the value of UHF as a distribution medium for pay tv. Touche Ross expressed concern about the long-term competitive advantage of monopoly power which would rest with a service provider on UHF where only one channel is available.* The Communications Law Centre favoured the introduction of pay tv through UHF (with later transfer to cable as that technology becomes available) so that eventually the UHF channel could be made available for public television. The Centre wanted the pay tv operator(s) to be required to transfer free of charge to

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* The Minister for Transport and Communications as reported in the Canberra Times, 10 February 1989

* Submission no 24, p.2.

public television the UHF infrastructure developed for pay tv. In this way pay tv on UHF was seen as a way of 'kick-starting public television'.[10] The capital cost of this infrastructure is $20 million.[11]

4.21 UHF broadcast transmission has the advantage that it can be established relatively quickly and at relatively small cost to the consumer and national investment. It has the potential to increase ownership diversity, by service areas being based on similar numbers as the present (40 or more), could be made available in most areas of the country where tv is available now and would provide an avenue for some limited local and community programming. Its disadvantages are that, for most major city locations, it can only accommodate one channel which would limit substantially the expansion of program diversity (choice) and does not have the capability of cable delivery to accommodate more advanced communications systems. That latter limitation would not be a significant concern if UHF transmission was seen only as an interim delivery system until more appropriate technology became readily available.

4.22 Even as a temporary option it excludes consideration of UHF for other purposes - eg. another national broadcaster, or other purposes such as education or even subscription television of a non-entertainment type. There are two additional disadvantages of UHF even as an interim system. The first is that, with introduction likely to be not before mid-1991 at the earliest, a UHF operator would not have sufficient time to break even and return a profit before alternative technology is expected to be available.[12]

4.23 The second additional disadvantage of UHF is restricted channel capacity - one or arguably two channels at the most. The Committee is concerned that this small capacity could risk the long term viability of pay television because of its reduced ability to differentiate the product from that on existing television and hence its adverse impact on value for money of pay tv. It is true that France has a single pay tv channel called *Canal plus* said to be very successful. By itself this is no guarantee of similar success in Australia where circumstances, particularly competition from five free-to-air broadcasters, are very different.[13]

4.24 Although the UHF option has some advantages the Committee does not support it even as an interim delivery system. The main reasons are limited channel capacity which could put at risk the long term success of pay tv, as well as there being insufficient time for UHF to break even prior to the availability of other technologies. The channel should be reserved for possible alternative uses - for national broadcasting, educational purposes or even for a different type of pay tv.

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[10] Submission no 35, p.28 and Transcript of 12 April 1989, pp.348,349.

[11] 1989 Pay TV Report, pp.82 and 72. The capital cost of $4m per service multiplied by 5 for the five capital cities.

[12] 1989 Pay TV Report, Vol 2, p.144.

[13] The Australian Film Commission submission on Canal plus, no 77 and Transcript of 4 October 1989, p.724.

Selecting Delivery Systems: The Options - (b) MDS

4.25 MDS is a point to multi-point delivery system which would involve the line of sight transmission of encoded signals from a program source (transmitters) in an area to receivers in private homes by way of SHF with reception on specially acquired aerials with appropriate decoding capability attached. The Committee has been advised by DOTAC that based on the existing frequency allocation plan, MDS can provide good quality reception on 3 channels in capital city locations and up to 10 channels in locations in which there is no current MDS technology use. If the frequency allocation plan were changed to increase the availability of MDS channels for pay tv, the number of good quality reception channels available in capital city locations would increase. Such a system could be operational within about eighteen months of a decision to establish pay tv facilities and penetration to consumers would be limited only by the economics of the system.

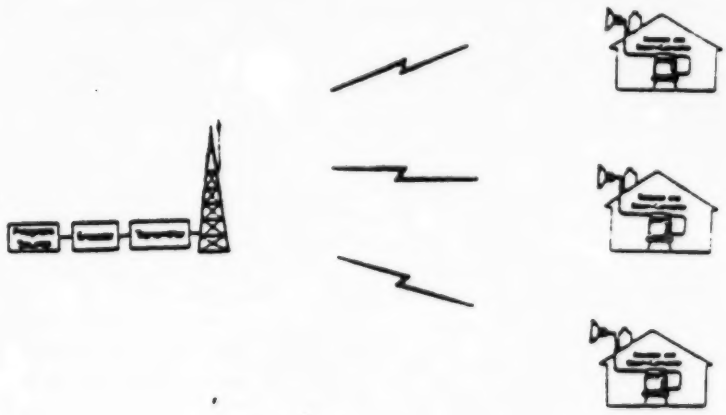

Illustration of Typical MDS Delivery System

Source: DOTAC

4.26 The DOTAC report recognised MDS as a delivery mechanism but did not consider it further because 'the then Minister for Transport and Communications announced that MDS will not be used as the primary delivery system for pay television'.[14] There were numerous submissions on the possibility of utilising MDS technology for pay tv distribution. Generally these were from organisations which wished to utilise MDS technology for the delivery of a pay tv service quickly.

[14] 1989 Pay TV Report, p.71.

Current operators of VAEIS systems proposed to the Committee that the technology should be preferred because it is readily available and there is experience in place in major cities on which to base a successful pay tv service. There was a recognition generally that MDS might be overtaken eventually as a transmission method by cable systems but it was argued, no doubt with some justification, that MDS would have a role always in those areas where cable would not be economic. Independent Television Newcastle (ITN) favoured the introduction of a pay tv system which would permit MDS operators to receive six channels of program feed from Aussat's B-series satellites and the insertion of local program features by the MDS operators. ITN also envisaged subscribers who did not want to receive local programming being able to subscribe directly to the satellite service by installing their own DBS aerial.[15]

4.27 As a carrier for pay tv MDS has the advantages that it can provide, in most locations, 10 pay tv channels and has the potential to cater for program diversity and diversity of ownership. There is scope for making the service available to a substantial proportion of the community and for the provision of some local and community programming. Disadvantages for MDS technology are that whilst it is cheaper on a per channel basis for the consumer it may be more costly as a system than UHF. If it were to be the final system, it does not have the capability to accommodate the introduction of more advanced (interactive) systems in the future.

4.28 It should be recognised that in identifying MDS as an option it has to be used with an initial or feeder technology such as satellite or cable. This is because there is no method of connecting the large number of MDS service areas. MDS needs to use other systems, either satellite or cable, as feeders.

Selecting Delivery Systems: The Options – (c) DBS

4.29 Direct Broadcasting (DBS) by satellite could be delivered into homes by encoded signals from Aussat B-series satellites to specially designed earth stations to receive transmissions broadcast on a national basis with each consumer (household) needing an earth station. DBS can provide up to six channels reaching 94.4% of the population through relatively low cost individual earth stations in the majority of cases. It is expected that the Aussat B-series satellite which would provide such a service will be ready for operation during the second quarter of 1992.

[15] Submission nos 5,43,56 and 59.

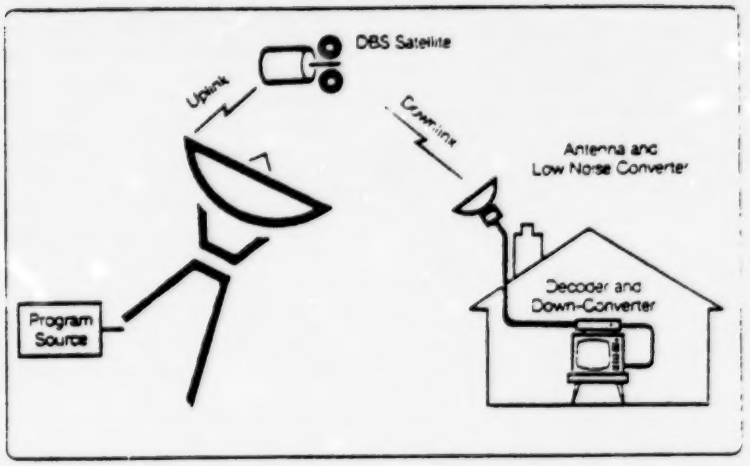

Figure 3.3 Diagrammatic explanation of pay television provided via Direct Broadcast Satellite (DBS).

Source: The 1989 Pay TV Report, p. 19

4.30 DBS systems are a readily available and proven technology. They have been used for both Homestead and Community Broadcasting Satellite Services and Remote Commercial Television Services (RCTS) in the remote localities of Australia for some years. The West Australian Government advocates DBS as the primary method for delivery of pay tv. This conclusion is based on pay tv having to meet the objective of simultaneous universal access and choice of which equity of access is an integral part. The second submission acknowledges that the Aussat spot beam on its B-series satellites will not reach 15% of the State population. It says the Western RCTS service area covers all non metropolitan WA including the 15%. An agreement between one or more of the pay tv operators and the RCTS licensee could deliver pay tv programming during the RCTS downtime.[16]

4.31 The Touche Ross submission is critical of cable as a delivery system for pay television and complementary of DBS. The advantages it claims for DBS include maximum audience reach from day one which improves the prospects of commercial viability, the minimisation of total investment and maximisation of the use of productive resources, and low marginal cost. The conclusion reached is that in a free market DBS is the most cost-effective means of delivering pay tv to the subscriber.[17]

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[16] Submission no 47, pp.1,4 and 5.
[17] Submission no 24, pp.2-5.

4.32 Clearly, the company has powers of analysis not available to governments. Thus the latter are not in a position to pick the most cost-effective delivery system[18] but Touche Ross is!!

4.33 Initially the WA Government supported DBS because it was the only system that could provide simultaneous universal access.[19] It later changed its view by adding delivery during RCTS downtime when it realised that DBS would not cover all of WA. It should be noted that the RCTS option for remote areas of Western Australia is not the only option. Others include the combination of RCTS with MDS or cable with MDS. Neither is the RCTS option the least expensive or the most convenient. For households that have neither an earth station nor a VCR the establishment cost could be as much as $4000. This figure does not include the regular cost of video tapes nor does the proposal allow for the significant inconvenience of changing tapes during the downtime hours.[20]

4.34 In paragraphs 4.13 to 4.18 the Committee stated and explained its selection criteria for choosing a delivery system. Equity of access was one but not the only criterion. It is obvious that no one system can meet all the criteria to the maximum and there are severe limitations in restricting the criteria as is the case in submission number 47.

4.35 Direct broadcast by satellite scores well in respect of equity of access and timing. The effect of having six channels gives DBS reasonable opportunities for program diversity and some, although limited, potential for competition. But DBS has some significant disadvantages. It can provide little diversity of ownership because it serves the national market and therefore there are no opportunities for local and community programming. It cannot provide for advanced television capacity. But perhaps the biggest disadvantage is cost to subscribers. The cost of earthstations outside the 52 dBW contour are said to be over $1000 a station and outside the 47 dBW contour (see map) Aussat sees pay tv being delivered only by community ownership arrangements.[21] This could affect adversely market penetration of pay tv in these areas. Further there is the investment loss for metropolitan subscribers who switch to the bigger capacity cable technology when it becomes available.

4.36 Overall DBS has some significant disadvantages and is not able to meet or meet adequately many of the criteria. In these circumstances the Committee is not disposed to recommend DBS as a delivery mechanism for pay tv.

Selecting Delivery Systems: The Options - (d) Cable

4.37 Cable distribution utilises coaxial and/or optical fibre technology to reach households in a manner similar to the provision of ordinary telephone services. Depending on the technology used, it can provide up to forty channels (coaxial)

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[18] presumably this means the least cost method of delivery

[19] Submission no 10, p.5.

[20] $3000 for the dish plus decoder - submission no 47, p.3 - and say $750-$1000 for the VCR.

[21] Transcript of 4 October 1989, p.766.

or more (with optical fibre) and it is expected that by 1994, broadband service capability will have reached the point in its development that it will be practicable to commence reticulation to about 60% of households. Reticulation, to the 60% level which would be to capital cities and major provincial centres, would probably take from six to ten years depending on the demand for pay tv and other broadband services.

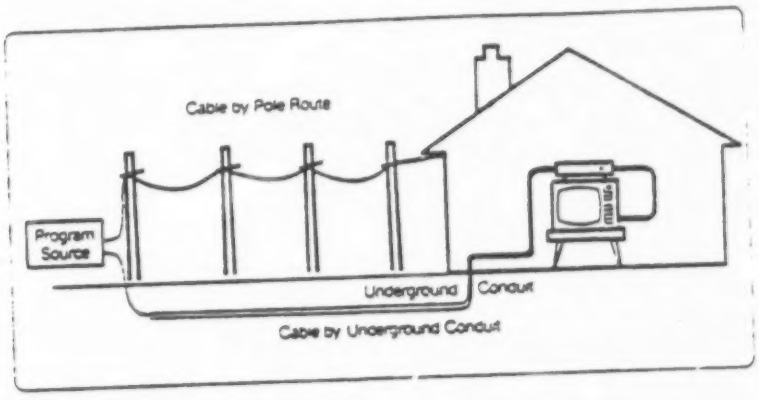

Figure 3.4 Diagrammatic explanation of a cable pay television system.

Source: The 1989 Pay TV Report, p. 20

4.38 Generally speaking, there is recognition in the evidence of the comparative advantages of cable as a delivery system. Because of this, Hoyts says that it is essential that policy formulation have the development of cable as its ultimate objective.[22] Perhaps the only or major dissent to this point of view came from Touche Ross. The company has several criticisms of cable. One is that '(t)o force any untried and potentially uneconomic technology (for example, the Telecom option) onto investors and the unsuspecting public is to threaten not only the future of pay tv in Australia, but to undermine Australia's image as a modern free enterprise economy'.[23]

4.39 Telecom's rebuttal says that optical fibre is a tried and proven method of communications carriage and has been used in the trunk network and inter-exchange network for some years. It refers to its pilot residential studies in Sydney and Melbourne and to the shared costs of the associated optoelectronic equipment.[24]

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[22] Submission no 37, p.15.
[23] Submission no 24, p.3.
[24] Submission no 63, p.1.

4.40 Telecom is not alone in this view. A researcher at Bell Communication Research Inc in the United States says that early indications are that optical fibre to the home 'is viable in terms of both technology and economics'. The article refers to several telephone companies in their common carrier capacity either having begun or having announced plans to begin transporting cable television signals over fibre.[35]

4.41 Another major criticism of cable by Touche Ross is that unlike the UHF and DBS options the majority of its costs fall on the carrier who then has to recover these costs from operators and users. The allocation of these costs make cable very unattractive whilst the number of users is relatively small and since it will take almost a decade to reach a satisfactory penetration rate. The conclusion made by Touche Ross is that 'it seems clear that the commercial success of pay-tv will be totally compromised by a decision to use cable'.[36]

4.42 What the company has done is to rearrange the estimates of expenditure (mainly investment costs) of the three delivery systems as shown in the 1989 Pay TV Report (page 74) to show where the incidence of costs fall - carrier, operator and, by a process of subtraction, the subscriber. Market penetration rates are then used to obtain costs per subscriber. The following is the result:

REVISED COSTS SHOWING COST INCIDENCE

	UHF	DBS	CABLE
Total System Costs ($m)	260	1,890	5,700
Carrier Costs ($m)	Nil	10?	5,000
Operator Costs ($m)	20	50?	Unknown
Total Subscriber Costs ($m)	240	1,840	700
Costs per Subscriber ($)	250	500	250
Assumed Penetration Rate (%)	20	50	50

Source: Touche Ross, submission no 24, p.5.

4.43 It is difficult to fathom the purpose of these numbers. The DOTAC report says (p.73) that its table 'provides a summary guide to the value of opportunities associated with the three delivery systems'. There is no valid reason to be critical of a delivery system because the majority of the costs fall on the carrier who has to recover them from operators and users. What the submission fails to realise is

[35] P W Shumate, Jr., Optical fiber reach into homes, Spectrum February 1988, pp.43,44.
[36] Submission no 24, p.5

that optical fibre delivers broadband services and can also be used to carry television signals. There is therefore no case for attributing all the investment costs to pay tv and then drawing conclusions from it. In any event, where investments have a long gestation period it is just not possible to expect anything more than negative returns in the early years and it does not make sense to abandon investment for this reason alone.

4.44 Some months after receipt of the Touche Ross submission Telecom, at the request of the Committee, provided some detailed information on costs. The organisation said if pay tv was to be introduced from September 1990 (the earliest it can be introduced in terms of the moratorium) the cable technology of optical fibre/coaxial would be the only one feasible. The cost (pillar to house) would be about $50,000 per 100 homes passed in metropolitan areas. Telecom provided a more detailed costing for optical fibre based on cost trends saying that the cost per customer would be $900 in 1994, falling to $500 in the year 2000.[37]

4.45 Interestingly, when one introduces channel capacity into the calculations, either for cost per subscriber or total system costs, cable, with a minimum 40 channel capacity, has an enormous comparative advantage as can be seen from the next table:

DELIVERY SYSTEMS: COSTS PER CHANNEL[1]

	UHF	DBS	CABLE
Total System Costs per Channel ($m)	260	315	142.5
Costs per Subscriber per Channel ($)	250	83.3	6.3

[1] Channel capacity of 1(UHF), 6(DBS) and 40(Cable)

Source: Derived from previous table.

4.46 Cable scores extremely well in terms of channel capacity. Its additional capacity gives it a substantial comparative advantage over other delivery systems in relation to program diversity, localism and community programming and the potential for competition between pay tv providers. Capital costs to subscribers are medium, it has the potential to provide diversity of ownership and cable is the only delivery system that has the capacity to provide for new services some of which would be interactive.

[37] Submission no 58.

4.47 The only drawback of cable, a short-term limitation, is in respect of access and timing. Information provided by Telecom shows cable to the home would not be available before 1994 and then would be available only progressively.[28] This choice, of using cable as it becomes available as the only mechanism does not satisfy the criterion of universality of access and timing.

Selecting Delivery Systems: The Preferred Solution - Cable/MDS

4.48 In these circumstances the options are to use MDS in conjunction with either satellite or cable, or both, so that all the selection criteria can be satisfied. It should be recognised that MDS is only a stop-gap solution which will have to give way to cable when it becomes available. It is clear from the table on comparative advantages of delivery systems that cable should be the pay tv delivery system in the long-term. The superiority of cable is recognised by almost everyone. Care should be taken not to put in place short-term measures which inhibit the introduction of cable. The use of indirect broadcasting by satellite with MDS as the primary method of delivering pay tv, particularly with 'soft entry' pricing and long-term contracts for satellite delivery (see paragraph 7.10), would inhibit the introduction of cable. Therefore, the committee does not support the satellite/MDS optim of primary delivery for pay tv.

4.49 There will be areas of Australia that cannot be serviced by cable-MDS. For these areas the system that is best able to meet the criteria should be chosen. This could be satellite-MDS or satellite-UHF or something else.

4.50 In view of the foregoing the Committee recommends that:

(a) the primary method of delivering pay tv in Australia be cable/MDS;

(b) for areas that do not have cable the system chosen should be the one best able to meet the criteria used by the Committee in its analysis; and

(c) the progressive transfer to a full cable system be one of the conditions of the pay tv licence.

Telecom as Common Carrier

4.51 Unlike in 1982 when the Tribunal reported on pay television, Telecom Australia has made considerable progress in the laying of fibre optic cable. Telecom has informed the Committee of its decision to lay optical fibre on the main cable sections of the customer access network, that is between the local telephone exchange and the neighbourhood pillar. The objective of the investment is to provide the potential ability to connect 60% of Australian homes for broadband services commencing in 1994.[29]

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[28] Submission no 81.

[29] Submission no 81.

4.52 It is therefore almost academic to talk of other providers of optical fibre outside Telecom, including such providers for the final stages of cable. It is a move that would be impractical because of the broadband nature of the services provided.

4.53 Any move to duplicate the Telecom services would be wasteful and a misdirection of resources given particularly the virtually unlimited capacity of fibre optic cable. Therefore, Telecom should be the common carrier for cable pay television. Telecom should not be allowed to be a pay tv operator and neither should it have any say in influencing or determining program content. The former would take it outside its charter of responsibilities, the latter would give it regulatory powers it should not have.

4.54 In view of the foregoing the Committee recommends that:

(a) **Telecom Australia be made the common carrier for cable pay television, as prescribed in legislation; and**

(b) **the legislation prohibit Telecom Australia from being a pay television operator and from influencing or determining the program content of such television.**

4.55 Tied in closely to the method of delivery are other establishment issues relating to structure of the system and covering issues such as the separation of carriage and content, the number of markets, exclusive franchises, single or multiple channel systems and ownership and control. It is these matters that the next chapter discusses.